

BE FIT AT 40

*By the same Author*

"Backache and the Slipped Disc"

"Industrial Injuries"

"Injury Prevention in Fire-Fighting"

"Sports Injuries—Prevention and Treatment"

"Sports Injuries Manual" (Nicholas

# BE FIT AT 40

*by*

DONALD F. FEATHERSTONE

Member of the Chartered Society of Physiotherapy

Founder/Member of Committee for Research into Treatment of Athletic Injuries

Principal of Athlete's Injury Clinic, Southampton

Physiotherapist to  
Southampton Football Club, Hampshire County Cricket Club,  
Southampton Speedway Team

Late Physiotherapist to Dr C. R. Woodward's Athletes Clinic,  
Harley Street, London

Late Student-Supervisor, Physical Medicine Department, Prince of Wales  
Hospital, London, N

Sometime Physiotherapist to  
Central Middlesex Hospital, London, Garston Manor Rehabilitation  
Centre, Royal South Hants Hospital

THORSONS PUBLISHERS LIMITED

91 St Martin's Lane, London, WC2

PRINTED AND MADE IN GREAT BRITAIN BY  
THE GARDEN CITY PRESS LIMITED  
LETCHEWORTH, HERTFORDSHIRE

## CONTENTS

	INTRODUCTION	7
<i>Chapter One</i>	HOW FIT ARE YOU?	13
<i>Chapter Two</i>	WHY ARE YOU SO UNFIT?	21
<i>Chapter Three</i>	START NOW TO BE YOUR AGE	29
<i>Chapter Four</i>	PHYSICAL FITNESS IS VITAL	35
<i>Chapter Five</i>	HOW TO GET STARTED	41
<i>Chapter Six</i>	EXERCISE FOR THE OVER-FORTIES	49
<i>Chapter Seven</i>	FITNESS THROUGH GAMES	55
<i>Chapter Eight</i>	EXERCISE AT YOUR DESK!	63
<i>Chapter Nine</i>	CAN EXERCISE BE HARMFUL?	73
<i>Chapter Ten</i>	ARE YOU TOO FAT?	81
<i>Chapter Eleven</i>	ARE YOU TOO LEAN?	87
<i>Chapter Twelve</i>	YOUR NEXT PROMOTION MAY KILL YOU!	91
<i>Chapter Thirteen</i>	BE LIKE JACK SPRATT!	97
<i>Chapter Fourteen</i>	YOU MUST THINK YOUNG!	107
<i>Chapter Fifteen</i>	FACTORS AFFECTING FITNESS	111



## INTRODUCTION

Life is probably the toughest of all competitions. If it is to be handled with any degree of success and enjoyment it requires strength, endurance, energy, and the protection from stress and strain that a physically fit body will provide. Just as an athlete must train for his sport, people must learn to train for the load and the challenge that Life throws at them. They cannot "leave the field", so they must get into condition to play the game.

If safety in a sudden emergency depended upon even nominal strength and endurance, the average man would be unable to meet the challenge, regardless of his courage, intelligence, and spirit. If a father had to undertake hard physical effort for any length of time to protect his family, his only hope would be to find a club or a gun !

Generally speaking, people in civilised communities are lacking both in strength and endurance because of the artificial life encouraged by modern civilisation, in which life is made as soft and easy as possible, with physical effort diminished to a minimum. The average man pays more man-hours of attention to his car (which he can get serviced or replaced anyway) than to his own machine—his body (which is irreplaceable).

The physical fitness of the average executive is so low that his next promotion may kill him ! Solely because he will be

unable to stand the added pressures and the new responsibilities of his promotion.

The person towards whom this book is directed is a man of mature years, engaged in a responsible job. It is not too much to expect, therefore, that he should have a reasonably frank idea of his present state of physical fitness, his potentialities in that field, and the amount of time he is prepared to spend in attaining those potentialities. His target is not to become a highly trained athlete, but to be able to carry out his daily life feeling that good health is within his grasp, that he possesses an inner consciousness of his ability to run up an escalator or to chase a bus without having to take a long time to recover.

Only by a reasonable standard of physical fitness can good health and happy living be fostered. A man's bodily condition is developed and maintained by active work and exercise—not because of the amenities of modern civilisation but in spite of them!

Physical fitness is, generally, functional efficiency sufficient to handle daily work and recreational loads without undue fatigue, and with sufficient reserve for physical emergencies and special stress. Being physically fit means being able to carry on comfortably daily activities with a reserve for any emergency that may arise—such as having to push a car out of a ditch, or shovel a path clear of packed snow—and being able to recuperate quickly after the effort.

Physical fitness is not to be confused with health, which is an ingredient of physical fitness. But health is, primarily, freedom from disease. It is necessary to be healthy to be fit, but it is not always necessary to be fit to be healthy. Physical fitness is a relative term dependent on the type of life and activity of the individual. For example, an agricultural worker or a farmer must have a higher degree of physical fitness than



## INTRODUCTION

a sedentary worker. Body build, of which there are three main types or basic physical grades, must also enter into the picture, otherwise a small, lean man will flog himself to death trying to become impossibly big and strong.

There are skinny Ectomorphs, or greyhound types; the muscular Mesomorphs, or ape types; and the well-padded Endomorphs, or hippopotamus types. Of course, there can be combinations of these three, which include a great many physical and mental characteristics beyond skinniness, fat and muscularity. The average person is graded according to the number of characteristics of each type that go into his physical make-up. The differences between the three types are obvious and explain immediately many of the differences in physical ability, health, fitness, and length of life between different people. Just as we can buy £5 or £30 suits, so do some of us inherit £5 organs or £30 organs! Body-type classification is perhaps the best known basis, at the moment, from which a prediction of health over the whole life span can be made with any degree of accuracy. The average man has characteristics of all three in his physical make-up—the medium body-type with these attributes in fairly even ratio will make the best all-round athlete and generally the fittest and longest-living member of the community.

But, too often this type of man is prone to sit behind a desk, overworking his brain and underworking his body. As a result, he becomes tired more rapidly, develops tension—which has a detrimental effect on decisive and clear thinking—and will frequently succumb to the pressures surrounding him because his lack of physical energy and endurance gives him no protection against it.

Unfit people are involved in more domestic strife. They do not have enough energy to “repair that cupboard drawer”,

“to go to the club dance”, or “to play with the children”. They are more irritable, less fun and generally duller to be with. Their problems loom larger and seem more difficult because they “don’t feel too good”.

Why do men give so little time or thought to any form of regular exercise? When asked, answers vary :

I don’t have time !

I understand regular exercise is bad for the heart.

I don’t know the right exercises to use.

When I exercise I get stiff and sore, so I get fed up.

I have always understood that it is not necessary to exercise to be fit.

I’m just too lazy !

I get all the exercise I need pushing a lawn mower around !

What I get out of it isn’t worth all the time and effort.

Every single one of these comments is discussed and, it is hoped, solved in this book, but for the sake of argument, let us take a look at the last reason for not exercising, which, though last, is by no means the least important. It is naturally important that an individual “get something out of it” when carrying out a fitness programme, beside the knowledge that he is fit and the feeling of well being that is the end result of a proper programme.

Men who are not fit are “promotion risks”, both to their employers and to themselves, because promotion not only brings more money in its wake but also added pressure and responsibility—so the promoted man’s daily stress is going to be greater. This means more likelihood of developing ill-health because stress is one of the chief causes of disease. To develop and sustain a high level of personal fitness is the best possible prevention against ill-health. The same thing applies when a

## INTRODUCTION

man gets married—his stress-load increases as do his domestic responsibilities and pressures. The conclusion then is that for no other reason than to handle the increased stress that success brings you, a man should give some thought to the fitness of the machine he is going to live with for the rest of his life.

Remember, as a man gets older his stress-load increases because of his greater responsibilities in business and domestic life, but his physical machine is growing less fit to handle the load. This is the reason why so many men run into serious trouble in their forties and fifties—some even in their thirties. So, if a man wants to know the dividends he is going to get from his physical fitness programme or investment, then he should take a look at his physical balance-sheet and project the picture into the future. ;

Let us bring it all down to a very personal level, let us direct our attack at YOU, the man who is reading these words. YOU probably sit behind a desk, nursing your responsibilities, conscious that YOU are not as fit as YOU ought to be, that YOU are too fat and don't look so good in bathing trunks nowadays, that YOU don't take enough planned exercise, that YOU shouldn't puff and blow so much when you chase the children upstairs to bed, that your heart shouldn't pound so rapidly afterwards either. YOU are probably vaguely aware that YOU should get down to some sort of routine to obtain a higher standard of fitness, but YOU don't quite know what to do, and YOU lack what it takes to make the effort to get started. There is not one of YOUR problems which is not satisfactorily answered in these pages—so read on!

But, it might be that YOU refuse to accept these personal remarks as being applicable to YOU, that YOU think it

quite normal for such things to occur, and that YOU are *not* in need of any form of planned and progressive physical fitness programmes, or even a once weekly swim or game of golf. YOU could be wrong and shaken from that imperturbable perch by taking the trouble to turn to the next chapter. Here YOU will find some simple tests that can be done in a few minutes, each of which will result in a conclusive and accurate statement of your actual state of physical fitness. Do them, and know if YOU are unlike other mortals and need no exercise, or if, as we suspect, you are blissfully building a big bomb under yourself in your ignorance or arrogance!

## CHAPTER ONE

### HOW FIT ARE YOU?

Where, or how, can the average man find out just how fit he is at any given time, whether a physical fitness programme upon which he may be working is giving results and how quickly, and just how much of an athlete he is?

There are very few facilities for the average athlete to test himself or to be tested, subsequently there are even less or none at all for the average man! When a man puts a lot of effort into a new habit, such as a daily physical fitness routine, it is very encouraging if he can see, in writing, a set of figures which will prove to him that the programme is actually doing the things for which he had hoped. Such encouragement is far better than the rather nebulous and unmeasurable effects such as thinking that he feels fitter, that he can ascend stairs with less effort, and is likely to encourage him to go at his exercises with renewed vigour.

The requirement is some form of simple test which can be carried out in the man's own home, the test to be carried out at regular intervals, say monthly, under as nearly identical conditions as possible.

Ideally, the subject should possess the following physique attributes in order to be in a reasonable state of fitness, but most of them will have to be worked for so that they should represent a target which, when attained, will demonstrate that some tangible physical results have been obtained, in addition to those shown by other more active tests.

## BE FIT AT 40

1. The subject should not be more than 10 lb. over or under average weight for his height and size.

2. He should not have more than *one inch double-fold* of skin and fat on his cheeks, arms, abdomen, waist and buttocks.

3. He should be a normal body-type—not extremely frail, nor soft and fat. Not extreme in proportion and moderately well muscled.

4. He should have at least two inches chest expansion.

5. His chest girth, when expanded, should be greater than normal abdominal girth by at least five inches.

6. His muscles—biceps, abdominals, buttocks, thighs, calves—to be hard and well developed when tightened (contracted).

7. He should possess a good, erect posture. Straight back, flat abdomen, feet in condition.

Tests of minimum fitness—ten points given for each test passed—a total of seventy is a pass mark.

1. *Normal resting pulse rate.* Assume lying position for five minutes, then take pulse rate while lying. Pass equals pulse rate of eighty or less.

2. *Pulse rate, standing.* Pass equals a difference of twelve or less between this and lying pulse rate.

3. *Pulse rate after exercise.* The subject runs on-the-spot at one step per second with a medium knee lift. Pass is pulse rate of 130 or less taken immediately after two minutes of such running.

4. *Pulse rate after exercise—recovery.* Take the pulse again TWO minutes after the running has ceased. Pass rate if pulse within five per cent of normal resting pulse—see Test 1.

5. *Breath-holding.* The subject should be timed whilst he

## HOW FIT ARE YOU?

is holding his breath for as long a period as possible. Pass equals fifty seconds for males.

6. Push-ups until tired, done at own rhythm, but with conscious effort to do them correctly. Pass is fifteen press-ups in one session.

7. Deep knee bends until tired at rate of one per second. Pass is fifty.

8. Lying on ground, hold legs 18 in. off ground for as long as possible, with knees locked and legs straight. Hands are kept on floor. Pass equals sixty seconds duration of exercise.

9. Feet together, bend knees, touch hands to floor in front of toes. Keeping hands on floor, straighten knees completely. Pass equals ability to perform test correctly.

10. Stand on one foot with opposite knee raised to hip height in front. Hands on hips. Close eyes and hold position with no loss of balance for five seconds. Reverse position of feet, keeping eyes closed, and hold position for five seconds. Pass equals ability to do test without loss of balance.

That is a basic, general test series for minimum fitness. Further tests of a more involved or strenuous nature are as follows and can be utilised at some later stage of the fitness campaign.

### *Organic Efficiency*

1. Nerve/muscle steadiness—hold a full glass of water steady at arms' length for thirty seconds.

2. Recovery from dizziness—lean sideways, place finger on marked spot on floor, take ten turns around that spot with finger remaining in same position. Then walk a ten foot straight line five seconds after ceasing exercise.

3. Breath-holding after exercise—skip or run on the spot

for sixty seconds, then hold breath for thirty seconds.

4. Take the pulse, then run on spot for five seconds, raising knees twenty times in that period. Pulse should return to normal within two minutes.

### *Athletic Efficiency*

1. Pick up and carry partner of own weight for one hundred yards.

2. Do thirty press-ups.

3. Run one mile in seven minutes.

4. Standing long jump—your own height plus one foot.

5. Kneel, jump swiftly to feet and balance whilst THREE is counted.

6. Stand to attention with both arms straight out in front—diver's stance—then stand on toes for twenty seconds.

7. Lay on back, hands behind neck. Lift both straight legs off floor together twenty times—then raise trunk from floor (sit upright) twenty times.

The reason for the emphasis on pulse rate lies in that the trained man has a slower pulse rate, generally, than the untrained man. This is because their hearts are more efficient and pump more blood with each beat than does the heart of the untrained man. Actual figures vary, but in the case of an athlete, he is usually found to have about nine less pulse beats per minute than the average person who has about seventy-two per minute, decreasing in old age. One survey has shown that the pulse rate of athletes averages sixty-nine during their first year of training, drops five beats in the second year and a further eight beats in the third year. Exercise undoubtedly helps to lower the pulse rate and make the heart more powerful; a low pulse and powerful heart are startling advantages



## HOW FIT ARE YOU?

in any form of endurance event, or heavy and prolonged manual labour.

Life is a sort of physical recipe, needing as ingredients, varying amounts of endurance, agility, body-flexibility, balance, strength and co-ordination. All of these factors are improved by a man having a highly developed heart and lungs, the vital organs which keep the body operating after it wants to give up.

In general, body-types also enter into the picture—men with long arms and legs, with relatively small trunks, are physically weak types in sustained heavy work, but they may well have great speed and endurance at lighter jobs. Small people are relatively stronger than tall ones, and they are also quicker. Short, heavy thick-set men are remarkably strong and are ideal for strenuous work.

There are other parts of the body which help to determine a man's physical efficiency; studies are constantly being made into every possible factor in the overall picture. These studies will have remarkable results eventually, resulting in less wasted effort and better direction of strength. There will also be a better grading of men into jobs where their best accomplishments and performances are possible. In the end, this superior selection and guidance will eliminate, in advance, some of the failures, breakdowns and misfits.

Health and physical fitness are inter-connected but not interdependent—it is necessary to be healthy to be fit, but not necessary to be fit to be healthy. Nevertheless, the following health questions are worth periodical consideration :

1. Is your appetite good?
2. Are you losing weight?
3. Do you sleep well?
4. Have you any persistent aches or pains?

5. Do you lack energy?
6. Is your temper good?
7. Do you wish you felt better?

If you can answer "yes" or "no" in the obvious places, then the chances are that there is nothing much wrong with you because they are important and obvious questions which would be asked if you went along to your doctor for an overhaul.

He would check you for specific ailments, looking at you in this order :

- (a) Heart and arteries.
- (b) Lungs.
- (c) Abdominal organs (liver, spleen, stomach and intestines).
- (d) Endocrine system (glands like the thyroid).
- (e) Joints.
- (f) Bladder and kidneys.
- (g) Brain and nervous system.
- (h) The special senses (sight, hearing).

Then he would want to know your medical history, together with that of your parents, brothers and sisters. For instance, if you said that you had had rheumatic fever at fourteen, then he would examine your heart pretty closely. If your mother had been tuberculous then he would pay special attention to your lungs.

Although the dangers of heart disease are exaggerated, it is still the nation's number one killer, so it would be a major boon if your heart were sound. This would probably mean that your circulation was in good order, although independent checks for anaemia would still be made.

Ideally, everyone under forty should be X-rayed at least every five years for signs of early T.B.—so, however healthy

## HOW FIT ARE YOU?

the lungs sounded through the doctor's stethoscope, he would certainly have your chest X-rayed.

You would be asked for information about any abdominal upsets; your descriptions of digestive trouble, sickness, pain, or liverish feelings giving a clue to possible abnormalities, which can then be thoroughly tested and X-rayed to diagnose their exact nature. Gland disturbances are fairly obvious; if you were grossly overweight, for instance, it would point to thyroid disorder

The joints, particularly the finger joints and the knee, might be silent witnesses of rheumatic complaints, although your confirmation that they were painful would be needed. In the same way, a pale, puffy face with swollen ankles might tell the doctor that you had some kidney trouble, although, again, he would base his initial diagnosis on what you told him about possible bladder symptoms.

In nervous diseases, the body also often speaks for itself; but two familiar tests would be carried out on you—a torch would be shone in your eyes to see how the pupils reacted to light (failure to react might suggest brain disease). The central nervous system would be tested by tapping the crossed knee with a little hammer—if it jerked too much it might point to anxiety and over-excitement; if it did not jerk at all it might mean disease.

The doctor would, of course, seek specialist advice if anything apparently serious or suspect was revealed; he would be able to tell if anything was wrong with sight or hearing, for example, but would not attempt exact diagnosis.

He would be concerned not only with special diseases but also with the general health; it might be that although you were not really ill you had a number of minor indispositions which added up to not feeling well. Suppose you were losing

weight but your appetite was still good—that might point to tuberculosis or a wasting disease. But if you were not losing weight and your appetite was poor, that would merely indicate lack of fresh air and exercise.

So the doctor would want to know all about you—how much you smoke and drink, what your job is and how much exercise you take and whether you have any worries. It could, and often does happen, that an incorrect diet or an uncongenial job or many other factors cause minor signs of ill-health.

This is where your age would come in—the teenager who sleeps too little and the middle-aged man who eats too much would both benefit from a doctor's advice on how to live in his proper age group. For special diseases—under twenty the check would chiefly be to see if any rheumatic infection was present and that the heart was sound. Between twenty and forty the search would tend towards trouble in the lungs and stomach, since tuberculosis and gastric ailments are commonest in this age group. In middle and old age, your blood pressure, heart, kidneys, and joints would be spotlighted, and your weight would be carefully checked.

The examination over, you now know that you are one hundred per cent fit. All the same, you should go again next year because the war against disease is never over, and if the doctor should not take chances with his patients, neither should they take chances with themselves.

## CHAPTER TWO

### WHY ARE YOU SO UNFIT?

One of the world's leading physicists has been quoted as saying :

"One of these days, business and industry management must wake up to the fact that lack of physical fitness is costing them millions of dollars every year. The working life of the executive gets shorter all the time because of his inability to combat the tensions resulting from his responsibilities and his general low level of physical fitness. Costly mistakes are made by workers operating intricate machines due to fatigue that a fit person would not develop. Even the stenographer goes into physical doldrums in mid-morning and afternoon because she doesn't know how to eat to sustain her energy level for four or five hours. Lack of fitness causes accidents, absenteeism, broken deadlines for important assignments, low morale and, perhaps most important of all, a lack of ambition. The unfit person dreads responsibility because he or she instinctively knows they are not up to it physically."

The significance of these statements is emphasised by the many queries and complaints received by the medical profession from people in business and industry who want to know what to do about tension, weight control, fatigue, aching backs and feet or lack of pep and initiative.

That there is a remarkably low standard of physical fitness

amongst both workers and executives in industry and business cannot be denied. It is said justifiably that we are becoming a nation of sports watchers rather than a nation of players; television will add to this state of affairs as it progresses and more major sports events are shown. Another factor worthy of consideration is that of age; it is recognised that the proportion of elderly people in our community is increasing rapidly. So much so that a drive to end the system of compulsory retirement at fixed ages, irrespective of ability, has had to be launched by the Government. All local authorities are urged to encourage their fit employees to keep on working as long as they wish—the request being made in a circular issued jointly by the Ministry of Labour and Ministry of Housing and Local Government. The circular has been issued because the Government is concerned about the rapidly increasing numbers of old people in the community. If these people had higher standards of physical fitness throughout their working lives they would be capable of even greater physical effort in the later years whilst reaping the benefit also by higher standards of general health throughout their lives.

From the point of view of general physical fitness, the majority of people wish to carry on their normal daily life whilst enjoying a feeling of good health and being conscious that they possess the ability to run up an escalator or chase after a bus without giving up or having to take a long period of recovery. Many factors are not realised or appreciated by the average man and woman—they do not know that the condition of basic fitness required to perform one's daily tasks with a minimum of energy has to be worked for; it just does not arrive. They do not realise that that "out of condition" feeling is far too prevalent and unnecessary; whilst there is

## WHY ARE YOU SO UNFIT?

nothing seriously wrong there is a lot that is not quite right, full vitality is missing and one does not seem to possess that bronzed and glowing health enjoyed by people depicted in advertisements—a point has been reached that is midway between health and illness.

Modern living conditions tend increasingly to encourage people to forgo personal physical effort and dull the urge to exercise; there is small call for physical effort in these days of relatively cheap and frequent transport when the universal wish is to get from one place to the other in the shortest time with the least expenditure of energy. Far too few young people have even the doubtful satisfaction of exercise by manual labour, and much of their leisure time is spent in a sedentary fashion.

The most conspicuous symptom when one is "out of condition" is breathlessness on effort, a major sign of general unfitness. By far the most common cause of this symptom is shallow breathing; the man who crouches over his desk by day and his fire by night becomes breathless on exertion because his lungs are not doing their job as a "blood purifier". The unfit man has to pant when exerting himself because he can only get sufficient oxygen by taking quick shallow breaths. His heart also has to pump harder and it takes him considerably longer to get his second wind. The incompletely expanded lungs are feeble as a blood purifier because they cannot carry away poisons quickly enough from the blood. This causes the blood to become saturated with carbon dioxide which irritates the respiratory centres in the brain and contributes to breathlessness.

Very few people breathe correctly; their lungs are imperfectly ventilated because they fail to move the ribs and

diaphragm sufficiently. Correct posture is essential in breathing; too many people breathe with shoulders hunched, so that their ribs are crowded together. Practically every army in the world puts belts around the middles of its men, thus preventing breathing exclusively with the abdomen and compelling the men to use the muscles of their chests, backs and shoulders. How can breathing be improved? By opening the window in the morning, taking a dozen deep breaths while rising on toes, then flinging the arms wide and allowing the air to get to the lower parts of the lungs. Most people have tried these exercises, but only a few persevere to discover the benefits received if they are kept up. It won't make new men of us, but it helps us to feel less like old men during the first hours of the day. Deep breathing takes oxygen into parts of the lungs not normally aerated, and fresh, cold air stimulates the circulation by its action on the skin. Combined with the mild exercise which also stimulates circulation, and the psychological effect of successful effort, the total result is a physical and mental tonic.

Exercise is vital, particularly because of its effect on weight. This must be considered in terms of the various tissues, allowing that one requires adequate musculature to handle the bony skeleton, plus the body weight efficiently. A moderate amount of adipose tissue is needed for protection against sudden changes of temperature, serving as a cloak to retain body heat and also as an energy reserve. Too much adipose tissue is a sure sign of poor physical condition, and in young people strength tends to diminish as fat increases. As an indication of the importance of preventing excess fat, it is pointed out that every pound of fat on the body requires 4,500 feet of minute blood vessels to maintain it! As anyone who tried it



## WHY ARE YOU SO UNFIT?

in order to get rid of one pound of fat it is necessary to will confirm, losing weight is not an easy matter. Theoretically, leisurely walk 144 miles, jog-trot forty-three miles or do 5,714 press-ups! Reduction will only take place if one's diet is suitably regulated in conjunction with an increase in one's physical exercise.

It is equally important that one should not be underweight. People who are markedly so may be subject to respiratory ailments such as tuberculosis, bronchitis and influenza or colds. They are more easily chilled and do not have the organic power of those with relatively more fat and muscle.

Just as important as diet and exercise is sleep, of which the average adult requires about eight hours in every twenty-four. This means up to nine hours in bed, because few people go to sleep directly their heads touch the pillow or get up as soon as they awake. It is possible to have too much sleep; many people imagine that if they could only have ten to twelve hours' sleep a night for about a fortnight they would become models of fitness. Actually they would feel sluggish, irritable and tired, besides suffering from insomnia! The old adage—"Early to bed and early to rise, etc.," has a lot of truth in it, and one generally feels better during the day if one can get up earlier. The benefits are possibly more psychological than physical, but it is pleasant not to have to rush one's breakfast, run for the train and arrive late at business.

A pleasant way of taking the exercise that is usually forgotten is by means of outdoor games, one of the greatest of physical and mental stimulants. The sedentary worker, with his narrow chest, deficient circulation and flabby muscles, particularly needs exercise, and almost any outdoor game played

regularly will produce the desired result. Better sleeping habits, improved appetite, attainment of muscle tone, and a mental freshening spring from the stimulation of the heart, lungs and other body organs that games can bring. The game that you enjoy the most is the one that will suit you best, and, in the same way, the game that gives you most benefit is not necessarily the one which takes the most exertion.

Exercise is a vital factor in life, but it must be combined with enjoyment, fresh air, sunshine and comradeship. One's choice of game will depend upon age, temperament, environment, facilities, etc., but younger people will naturally prefer the more vigorous games, such as the body-contact sports of football, rugger, hockey, etc. These games, whilst causing more injuries through contact, are less strenuous than rowing, cross-country running or track athletics because the competitors can rest during the course of the game. Golf is by far the best exercise for the older man, swimming and cycling are also very good. Tennis is one of the best forms of exercise and gives valuable training in quick decisions. Golf and tennis can, of course, be played by young and old, the former in any weather and on one's own. Squash, badminton and fives are vigorous and excellent games for the younger person, but racquet games tend to over-develop one side of the body to the detriment of the other. Another suitable game for the older man is bowls, which is a bigger test of skill than most people imagine; as an exercise it works the muscles of the legs and trunk, the constant bending provides a gentle form of self-massage to the abdomen.

There are certain fundamental relationships between strength and health, involving resistance to infection, improved circulation, breathing, virility, and a happier, more

## WHY ARE YOU SO UNFIT?

optimistic mental outlook. The normal functions of everyday life are improved by physical conditioning activities, as is strength; therefore strength and good health must, to a certain extent, go hand-in-hand. It is well known that bodily fatigue, lack of exercise, improper diet, infected teeth or tonsils, etc., cause general bodily reactions, which in turn affect muscular strength. This can indicate a lowered state of vitality—in other words, a person is “out of condition”.

A first step to alter this sorry state of physical affairs would be for a representative testing group of people active in business and industry to be formed, from whom information could be collected relating to their fitness problems. Following this, liaison should be made with a qualified and experienced group who could assist in developing practical and effective solutions to the problems. An approach should be made to the individual, his specific fitness problems discussed, and suggestions submitted as to how these problems can be solved—effectively and with a minimum amount of time. Reprints of all articles and advice, suitable for distribution throughout companies or organisations, should be made available as a service which managements can use to improve fitness standards amongst employees generally.

A recent report indicates that this could become an international problem—William Borberg, sometime President of the Security Council of U.N.O., has been reported as saying that “a psychiatrist should sit behind every delegate”. Dr. Frank Calderone, at the time U.N.O.’s Medical Director, says that workers are cracking up under the strain of life in U.N.O.’s glass palace H.Q. in Manhattan, the big trouble is loneliness and a feeling of insecurity, he says. When fifty men and women reported to him for treatment, he decided on a mass loneliness cure; he gave them a wonder party “and they

had a great time". When a woman employee came to him "with a neurotic pattern of behaviour" he decided she felt unwanted. Learning that she was going to Cape Cod for a holiday, he wired the Chamber of Commerce there and had her met with a brass band. "She came back a changed woman."

## CHAPTER THREE

### START NOW TO BE YOUR AGE!

Sooner or later, the fact will have to be faced that those days when a sports field could be pounded all afternoon and the dance floor traipsed all night are gone for ever. It will have to be acknowledged that energy must be conserved and that laziness—well carried out—can become a virtue! That might appear to be in direct contradiction to the possibly forceful precepts that have been propounded throughout this book, but it is not really the case—merely a somewhat subtle variation of the facts.

To live out one's life-span, it must be cheerfully decided here and now that changes are due, and the pattern might well resemble the following schedule :

Up to thirty—play six sets of tennis in the blazing sun if you wish, and then throw in an evening's roistering for good measure. In fact, exercise all you want because, if you are normally healthy, you will come to no harm whatsoever.

At thirty-five—begin to slow up. Leave tennis and switch to golf. To maintain a trim figure and posture, try a reasonable work-out in the gym, or, better still, regularly visit the swimming pool.

At forty—skip the whole thing. Cut good and lazy. Let the height of your energy-expenditure be walking or gardening—with golf or bowls as a healthy relaxation.

A man usually begins physical deterioration or ageing at about thirty years of age—and, also at that time, men find

that the pressure of their career and domestic obligations give them less and less time for exercise. However, it is a scientific fact that physiological ageing can be postponed or held up through physical activity; the speed of the ageing process depending to a large extent on the fitness standards which a man sustains.

Muscles, including the heart, which is the most important muscle of all, will deteriorate and not maintain their standards of fitness if they are idle; in other words, they adapt themselves to lower levels of need. When a man is forced to raise this level of need he shows and feels his physiological age, which may be higher than his chronological age. In a way, lack of fitness is a form of atrophy or muscular degeneration—a man of thirty-five who lets himself become physically forty-five can regain most of the fitness possible for the lower age by a fitness programme. This brings the heartening thought that it is possible to reduce one's physiological age towards their chronological age by means of exercise!

It could almost be said that it is never too late to start this, but it is wise to work out any physical programmes with a medical adviser when a man is in his thirties or over. To say that a man should become lazy at forty does not mean that he must sit around and let himself fall apart—medical research is fast discovering that to get physically active and stay that way is one of the best methods of remaining healthy and avoiding many of the more serious degenerative diseases. What it does mean is that a man in his forties can rest a little on the firm physical foundations he has built up in his twenties and thirties.

That may sound senile, but slowing-up is reasonable sense; in fact, some of the world's leading authorities on physiology dogmatically oppose all but the mildest forms of exercise after

## START NOW TO BE YOUR AGE!

forty, saying that it is quite possible to keep fit without exercise. They believe that, in their place, certain everyday factors carefully observed will enable physical fitness to be retained.

If this tears to threads many carefully observed theories of physical fitness, the supporters of the theory back their claim by mentioning two extremely intricate physiological combinations—muscles-and-nerves; heart-and-arteries. By the time one is thirty the muscles are developed, they cannot be improved very much, but they can be harmed; the muscle-and-nerve combination is on the go for every second of one's life—during sitting, standing still, lying down, running, or even digesting a normal meal. Each and every action performed requires a nerve-impulse and hang weight on a muscle, which stretches as one grows older. At the same time, recovery periods from fatigue become longer until they are almost snail-like—the result is inefficiency of many organs.

So far as the second combination is concerned—the only period at which the heart of a human being is in perfect order is during those few weeks before one is born. After that, it is slowly going downhill! Consider that, in twenty-four hours (even if you remain in bed) the heart beats 100,000 times and pumps 5,000 gallons of blood through the arteries! Hard exertion can send that load up seven or eight times. The pundits claim that, after forty years, it has already carried out prodigious labours—it is time to let it rest! Statistics seem to support them—although statistics are like bikini bathing costumes in that what they reveal is interesting but what they hide is vital—heart disease causes only twenty-three per cent of the deaths in people between twenty-five and forty-four years of age. In people between forty-five and sixty-four, the percentage rises to forty-six, and in those between sixty-

five and seventy-four to fifty-five per cent, rising to sixty per cent in those over seventy-five years.

It would seem that over-exercition might be claimed to be one of the leading causes of heart disease; paradoxically a completely sedentary life is another cause! Other factors influencing the disease are over-eating, emotional strain, lack of relaxation, and insufficient sleep. There is a prevalent exercise-bogy in the lives of many men in early middle-age; all of them have heard of people who dropped dead after a game of golf or when digging the garden. These stories are magnified and are not nearly so prevalent as they might appear. The worrier thinks of heart disease and avoids taking exercise without realising that those unfortunate people to whom this has happened have sown the seeds of such a collapse over the years. They did not drop dead because of their exertions but because they were sick people!

Despite its occasional troubles, only one death in seven or eight is directly due to heart disease *per se*. Considering the job it has to do, the heart keeps wonderfully fit; its muscle may get inflamed and its valves less efficient as a result, say, of rheumatic fever; it may get enfeebled and flabby because of an overload of fat in over-weight individuals; it may get irregular as part of a long-standing nervous upset; it may have to contend with increasing obstruction in the harder and narrower arteries of later life. Sooner or later, it may fall down on its job; it may suddenly stop work if its own blood supply is cut off, as occurs in coronary thrombosis. For the heart to stop is for life to end, as the tissues of the body must have their own oxygen and foodstuffs, and must get rid of their waste products if they are to remain alive. The heart is the body's pumping machine which, night and day, keeps the blood on the move carrying around oxygen, carbon dioxide,



## START NOW TO BE YOUR AGE !

feedings stuffs, waste products, and so on. It has pretty big reserves upon which it can call, the muscles of the heart growing bigger and stronger to compensate for defects and difficulties. Nevertheless, its reserves are not unlimited; there may come a time when its pumping power is permanently weakened and its reserves, at least for the time, are used up—this is heart failure.

Heart failure is caused when the blood cannot be sent in sufficient quantity with sufficient speed through the lungs, so that there is breathlessness and blueness; if fresh blood cannot be pumped with the necessary vigour and in the necessary quantity to the brain, there is faintness and giddiness; if the circulation is inefficient because the heart is too weak, then the fluids which it fails to sweep along may collect in the abdomen and the feet in the form of dropsy. When these symptoms of failure appear, it is essential to strike a balance by reducing the burden on the heart until it is equal to its tasks. True, there are ways and means, as by the use of drugs, of whipping up the heart to a new activity, or steadying it to a new strength. But, in the end, the issue cannot be dodged; rest is absolutely essential, and a quiet and regulated life, with an abundance of physical rest and the avoidance of worry and strain, are the basis of treatment.

The heart cannot continue, once its reserves are exhausted and the signs of failure are evident, to carry a burden beyond its pumping capacity. Output in the form of work must be reduced so as to equal the lessened capacity of the heart to work. Survival depends upon cutting one's cloth—which is one's mental and physical output—according to the length of one's material, which is the strength of one's heart.

When considering starting on a physical fitness programme in the thirties, which is the time to make up for deficiencies

in that line in your youth—first get a medical check-up. Then have your programme prepared or vetted by someone who is expert in these things. Start slowly and gradually, do not go off like a rocket and then bitterly complain about the early adverse effects of the unaccustomed exercise. Be regular, do not start your programme and then take a few weeks' break from it to return where you left off—because that is asking for trouble. In fact, the healthiest men in their thirties and forties are those who have *never* let up on physical activity since their school days. Finally, observe the following common-sense facts :

Lack of sleep is the same as over-exercise. To over-exercise AND under-sleep is an almost lethal combination.

Find a hobby early in life before you are overtaken by old age with nothing to do but get bored. Do not stop playing if you want to stay alive !

Take regular holidays, enjoy the change of activities in unusual surroundings. But, do not give up your newly acquired fitness habits during the holiday.

Last of all and possibly the most important—do not be over-weight. The person with body-weight that is right for their physique can stand and sit properly, keeping their muscles and organs in tune by simple pursuits such as mowing the lawn, weeding the garden and walking to and from the station each day. The strain that over-weight throws upon the heart muscle is deadly—controlled body-weight coupled with good posture is a life-saving formula.

## CHAPTER FOUR

### PHYSICAL FITNESS IS VITAL!

Mankind has necessarily been interested in physical fitness since the days of the caveman, originally as a means of actual survival because only the fittest men could live under the prevailing primitive conditions, and only the fittest men could hunt to provide the food essential for life. Only during the last fifty or sixty years has there been any real understanding of the actual physiological factors involved in the question of physical fitness, but much has been done during this period.

Injury is the occupational hazard of living, and its incidence is usually in direct ratio to the strains and risks involved in a man's occupation. Physical fitness is the direct opponent of injury, few factors approaching it in importance as a factor in injury prevention.

What is physical fitness? It can be defined in a number of ways, but in the end they all mean the same thing—adaptability or suitability for some specific muscular effort achieved by a development of the body to such a condition that this specified physical effort can be produced at will with a minimum of physical effort and risk. This obviously requires the greatest physical efficiency, and is dependent upon the mutual development of the various bodily systems, such as the muscular, respiratory, circulatory, co-ordinated by the central nervous system. There are three processes involved:

- (a) The muscular changes necessary for energy production.
- (b) Adjustments in the circulatory and respiratory systems to remove waste products and provides the muscles with oxygen and foodstuffs.
- (c) The means of co-ordination.

The end result at which to aim is for a man to possess high standards of agility, lightness, balance, stamina, endurance and judgement, so that movements can be performed easily and with economy of effort, having perfect control over every part of the body. All those attributes would stand a man in very good stead when under pressure !

Gradual and systematic toughening of the body is the principal means of maintaining physical efficiency for arduous work; lowered energy and loss of vitality are closely associated with loss of balance, flexibility, strength, agility, power and endurance. A man's bodily condition is developed and maintained by active work and exercise—not because of the amenities of modern civilisation, but in spite of them !

The great importance of physical exercise and training lies in the fact that by carefully graduated training it is possible to develop the muscles to a stage of actual energy production more than three times their normal rate. At the same time there will be a 400 per cent increase in the number of capillaries and a 100 per cent increase in their size—indicating that there will be a considerable upsurge in the blood flow with effects comparable to those in a motor if more petrol of higher octane value were produced.

Bodily fitness is attained by training, the aims of which are to be light and agile, to be able to perform movements with economy of effort, and to have complete control over the

## PHYSICAL FITNESS IS VITAL!

whole body. Training develops speed, agility, skill, endurance, flexibility, balance, improves reaction times (the speed at which a man will automatically react to a given signal or situation), and controls body-weight. So far as the last is concerned, all other things being equal—fat men are not as efficient as slim men! All these factors have obvious connections with injury in that lack of them invites ill-controlled movements and actions leading to muscular and ligamentous strain. In other words, the part played by fitness in the fight against injury lies in that it causes the muscles to possess tone and strength sufficient to support the joints on which they work, and to protect them from stress and strain.

Life and one's occupation will be carried out more successfully, with less fatigue and reduced chance of injury, if greater strength and endurance are developed, because, as it has already been said, the value of muscle power developed by training is inestimable in the prevention of injuries. Therefore, to increase the power of the main muscle groups prone to injury before they are exposed to those stresses and conditions which might cause injury will go a long way towards combating the soft-tissue injuries that are so prevalent in the heavier industries. Remedial-type exercises will increase the strength of the supporting muscles and ligaments of the knee and ankle, the hip and lumbar regions, the arms and shoulders.

Psychology plays a big part in the attainment of physical fitness—an added confidence is engendered by the extra strength, stamina and endurance, that an aggressive "get-stuck-in" attitude is encouraged. With such an attitude a man will be brisker in his movements, his assessment of a situation will be speeded up, his judgement will be improved—not only will he be physically better fitted to withstand strain over

prolonged periods, but he will also have a superior mental adjustment.

High-level physical qualities can only be developed by hard physical work. Generally speaking, people in civilised countries are lacking both in strength and in endurance because of the artificial life encouraged by our modern civilisation, in which life is made as soft and easy as possible and physical effort diminished to a minimum. This fact has been emphasised in recent years by Russian and Chinese soldiers' disregard of death and danger when fighting against Western civilisations during World War Two and in Korea.

To attain a standard of real physical fitness a man must build up a strength foundation, because with all other things equal, the stronger a man the better his physical performance. But strength alone is not enough; a man can be very strong yet lack adequate stamina to cope with prolonged labour—large muscular calves do not mean that a man will be the fastest mover up a ladder! Training is essential to the acquisition of strength, because strength development is a reversible reaction in that it declines as soon as training decreases. For that reason, rest during and after an injury is sometimes inadvisable. It is an odd thing that few men can truly conceive their capacity for dramatic strength increases, both during normal, fit periods or following injury.

There are certain general planned principles of training which provide a basis for planned and progressive programmes to strengthen the average man. At the same time it must be accepted that training is a personal affair and includes necessary attention to such factors as age, physique, temperament, time and facilities. Fitness is a matter of common sense in many ways—most people are perfectly well aware of those aspects of their lives, mental as well as physical,

## PHYSICAL FITNESS IS VITAL!

which are unsatisfactory. Only a few can be contented and fit without some exercise in the fresh air and without opportunities to relax. But, this condition of basic physical fitness required to perform one's daily tasks with a minimum of fatigue and energy does not just arrive—it has to be worked for!





## CHAPTER FIVE

### HOW TO GET STARTED

It is not easy to develop or instil new skills, fresh techniques and relatively hard exercises in older or established men. This is largely because of psychological rather than physiological reasons. It is not a simple matter to impress upon a man that physical conditioning is essential, that ballet dancers, acrobats, circus performers, singers, dancers and musicians spend many hours at painful and boringly repetitive practices so that they are better at their job, which is what it amounts to!

In selling a programme of physical fitness it is important to make the individual realise that he doesn't have to suffer in the process. With a scientifically devised and intelligently progressive programme there is no need to experience the aches, pains and discomfort that the average person too often associates with the commencement of a fitness programme.

Providing that the subjects are young, basically fit, and reasonably athletic, any properly devised programme will begin to have measurable results in six to ten days, with a daily programme, depending upon the type of activity and the intensity with which it is pursued. Youth is the time when most habits are established; when studying reasons why so few men appear to have developed regular fitness habits, the basic factor appears to be that such habits were not established when they were young. That is why it is difficult to sell

a fitness programme to an adult—he finds it hard to incorporate into his daily habit pattern.

Having received the green-signal light from your doctor, who must be consulted as to the advisability of your undertaking—out of the blue as it were—a physical fitness routine, then go straight ahead. To act as a sort of “starting-gun”, besides cleaning the skin of impurities, it isn’t a bad idea to have a Turkish bath or a Sauna bath. Not only does this tone you up, but it also “dates” the programme—“Yes, I started on the day after I had the Turkish bath, weighed fourteen stone then, now I’m down to twelve stone!”

Next, carefully decide which form of activity you prefer—scheduled and possibly stereotyped exercise routines or games? Whatever it is, and it must be programmed properly, exercises can be taken from the list that follows—begin easily and comfortably. Take it steadily at first, wrap up warmly afterwards, have a hot drink and take a hot bath or shower. Do not hang about before or after the bath—muscles chill rapidly and become stiff. Play or carry out the second session as soon as possible after the first, then go into the third session—muscles loosen up quickly if you keep at it a little at a time rather than a heavy dose once weekly.

If it is a game that you are using as a fitness aid, learn to play it properly; it is not only more enjoyable to do a thing reasonably well, but it also provides a greater incentive to stick with it. However, it is better to play badly and enjoy oneself than to become a slave to a game and play it in a mournful manner and in a constant state of self-criticism and envy of the better player. Muscle strains and joint sprains are caused more by playing incorrectly than by playing for too long.

Tests show that some fitness techniques are more efficient

## HOW TO GET STARTED

than others. This refers to the degree of fitness that they develop per time spent, and the speed with which they produce measurable results in such things as pulse-rate, reaction and strength. For example, jogging on-the-spot produces faster and better results than does brisk walking. Strength improvement will affect more of the other aspects of fitness, such as agility, endurance, etc., than any other single factor.

New and different exercises or even a game of golf after a lay-off, will cause muscular stiffness, a condition which seems to have no satisfactory answer as regards its onset or why its effects are felt some hours after exercise. It is possible to prevent stiffness by means of easy progression in the severity of the exercise undertaken. After a session, take a hot bath, with a cupful of ordinary soda added; make the second session of exercise as soon as possible after the first—"little-and-often" is vastly superior to one hard weekly period of exercise. Do not hang about after exercise so that you chill. Gentle massage aids recovery from stiffness and, given immediately after an exercise session, will stop the condition occurring. If a man warms-up well before doing anything really strenuous then he will find that he does not stiffen so easily or so frequently.

### SPECIMEN TABLES OF PHYSICAL FITNESS EXERCISES

#### No. 1

- |                              |  |
|------------------------------|--|
| 1. <i>Rhythmic Exercise</i>  | Feet astride jumping, with arms swinging sideways.                           |
| 2. <i>Breathing Exercise</i> | Any deep breathing exercise, preferable with arms being used also.           |
| 3. <i>Foot and Ankle</i>     | Standing; hips firm, feet together. Heels raising and lowering rhythmically. |

## BE FIT AT 40

- |                                |   |
|--------------------------------|---|
| 4. <i>Groin</i>                | Sitting on floor; knees crooked up with feet on floor. Use hands to give alternate resistance to knees pressing together and then forcing outwards. |
| 5. <i>Hamstrings</i>           | High kicking at hand, using alternate legs.   |
| 6. <i>Breathing Exercises</i>  |   |
| 7. <i>Knees</i>                | Stand with feet together; hands on hips. Slow deep knees bend and raise.  |
| 8. <i>Abdominals</i>           | Neck rest lying, touch alternate knees with opposite elbows.  |
| 9. <i>Lumbar</i>               | Hewing (arms above head with fingers linked, forward and downward movements as though hewing with axe).   |
| 10. <i>Breathing Exercises</i> |   |
| 11. <i>Hip Flexors</i>         | Lying on back. Alternate stiff legs slowly raise, knee bend, straighten and lower.  |
| 12. <i>Hip Extensors</i>       | Standing with back to wall, backwards pressure with alternate heels.  |
| 13. <i>Shoulders</i>           | Press-ups.  |
| 14. <i>Neck</i>                | Lying, wrestling bridge.  |

## No. 2

1. Four skip jumps on spot, then one jump, etc.
2. Breathing exercise.
3. Sitting, legs straight out in front. Alternate foot pointing.

## HOW TO GET STARTED

4. Sitting with crooked legs, squeezing hand between knees.
5. Lunging, as in fencing.
6. Breathing exercise.
7. Kneel (sitting on heels) raise and lower trunk.
8. Lying, both legs raising and lowering.
9. Forward lying, hands clasped behind back, head and shoulders raising.
10. Breathing exercise.
11. Stand; bend alternate knee up to the chest—press with arms folded around knee—relax and repeat three times.
12. Lying flat on back, pressing alternate heels into ground.
13. Stand facing wall. Right arm straight in front; palm of hand pressing into wall. Repeat with left hand, etc.
14. Sitting; hands linked together behind neck. Press head back against resistance of hands.

### No. 3

1. Arms swinging upwards, forwards, sideways and downwards rhythmically.
2. Breathing exercise.
3. Marching with bodyweight on outside borders of feet.
4. Lie on right side; raise left leg upwards and then lower slowly. Repeat right leg.
5. Lie face downwards. Hook right foot behind left heel. Bend left knee against resistance of right leg. Change legs and repeat.
6. "SKIING"—legs together and knees slightly bent, arms hanging loosely, legs straighten and arms swinging rhythmically.
7. Breathing exercise.
8. Stand, feet together. Hands outstretched supporting on

## BE FIT AT 40

- chairs. Left leg held straight out in front—right leg full knee bend. Change legs and repeat.
9. Lying, alternate single leg raise and touch ground with toe on other side of body.
  10. Forward lying, neck rest, head and shoulders raise, trunk turning.
  11. Breathing exercise.
  12. Lunge standing (as in fencing) downward pressure of rear leg.
  13. Lie face downwards. Hold cushion or weightier object between feet. Slowly bend and stretch both knees together.
  14. Press-ups.
  15. Lying, wrestling bridge.

## No. 4

1. Running on spot, with high knee raising.
2. Breathing exercise.
3. Standing, feet together, hands on hips. Alternate rhythmic heels raise and lower.
4. Crook sitting, self-resistance to inward drawing of knees.
5. Lie face downwards. Stretch right hand back to hold right ankle—with knee bent. Resist further bending of knee. Change hands and legs and repeat.
6. Sit in hurdling position (one leg stretched forward, the other stretched sideways at right angles, and bent to a right angle at knee). Rhythmic trunk pressing downwards to forward leg with opposite hand moving backwards.
7. Breathing exercise.
8. Long sitting, legs crossed at ankles, straight leg raising.
9. Long sitting, alternate toe touching.

## HOW TO GET STARTED

10. Hips firm, stride standing, trunk rotation.
11. Breathing exercise.
12. Lying, bicycling.
13. Standing, with back to wall, backwards pressure with alternate heels.
14. Sit. Both arms outstretched in front. Link fingers ('Butcher's Grip'). Try to break grip against resistance, keeping arms straight.
15. Sit. Using hands—resist backwards forwards and side-ways movement of head.

## No. 5

1. Skipping on spot (without rope).
2. Breathing exercise.
3. Hips firm standing, rocking on heels and toes.
4. Stride standing, downward pressure of alternate legs.
5. High kicking at hand, alternate legs.
6. Breathing exercise.
7. Sit on chair. Legs outstretched straight in front. Between feet hold weight. Keep legs straight, raise and lower weight.
8. Lying, trunk flexion to touch toes.
9. Stand, feet astride, hands on hips. Trunk movements in three's—press back and to each side in turn.
10. Breathing exercise.
11. Lie on back. Legs out straight. Place left leg on right (crossing at ankle). Letting left leg act as deadweight—lift straight right leg. Change and repeat.
12. Lying flat on back, pressing alternate heels into earth.
13. Press-ups.
14. Lying, wrestling bridge.





## CHAPTER SIX

### EXERCISE FOR THE OVER FORTIES

It is foolish for a middle-aged man, with his oft-denied paunch, on those occasions when he has to take an active part in some active operation, literally to run himself into the ground, endeavouring to prove to himself that he is every bit as good as he ever was! Whilst he may have laid down a good physical foundation in his youth, he now will find that the twenty-four hours available in each day are insufficient for him to do his desk job adequately, sleep, eat and train his creaking muscles to maintain the safe speed and effort of his youth. Running berserk two or three times a month will do him nothing but harm—he must temper his enthusiasm with discretion, realise his limitations and endeavour to get in enough regular, planned physical exercise to be able to maintain a reasonable and safe standard of performance.

It is not as though the target is to become a highly trained athlete; the desire is merely to carry out his normal, daily life feeling that good health is with him, and possessing an inner consciousness of his ability to run up an escalator or chase a bus without having to take a considerable time to recover. All is not well with the man in early middle age in the world today; he goes around in a semi-chronic state of fatigue, smokes too much, for various reasons he often suffers from nervous tension, and, finally, he generally lacks the benefits of planned exercise. This all calls for an improvement in personal health and fitness, aimed to stimulate full development and co-

ordination of the nervous and muscular systems, besides constituting the best possible way of fostering good health and happy living.

The person towards whom this chapter is directed is a man of mature years engaged in a responsible job—it is therefore not too much to expect that person to have a reasonably frank idea of his present state of physical fitness, his potentialities in that field, and the amount of time he is prepared to spend in attaining that potential. He must realise that he can underake many of the exercise routines given elsewhere for younger men, providing his basic state of physical fitness permits, and that he is prepared to accept certain modifications in his performance compared with those younger men. To undertake these schedules will undoubtedly be psychologically good, because he will have the mental stimulus of knowing that he is “with the boys” again. It also has the recommendation of being planned, progressive, and, best of all, regular. On the other hand, if he studies those schedules and reluctantly admits, if only to himself, that they are a bit too much for him in his present state of physical fitness and at his age, then he has certain other effective alternatives open to him; they are necessarily of a less severe nature, so their results will be slower and less marked, but, nevertheless, they will do wonders if he sticks with them.

Fitness is a matter of common sense, most people being perfectly well aware of those aspects of their lives, mental as well as physical, which are unsatisfactory. Only a very few can be contented and fit without some exercise in the fresh air, in spite of the words of an eminent doctor, speaking possibly with his tongue in his cheek, who says: “When one feels the need for exercise, one should lie down until the feeling passes off!”

## EXERCISE FOR THE OVER-FORTIES

Any outdoor games, played regularly, will produce something like the desired result in the man towards whom this chapter is directed. They will improve sleeping habits, appetite, tone up the muscles, and bring a mental freshness which springs from stimulation of the heart, lungs, and other body organs. No particular game is recommended; the one which suits the individual best is the one they enjoy the most; the game which gives the most benefit is not necessarily the one that takes the most exertion. Exercise is a vital factor in everyday life, but it must be combined with enjoyment, fresh air, sunshine and comradeship. The choice of a game will depend upon age, temperament, environment, and facilities. It is reasonable to pass over the more strenuous body-contact sports such as soccer and rugger and the arduous competitive pursuits such as rowing, cross-country running and track or field athletics. But, there are certain derivations from those sports which admirably suit the older man—for example, easy, non-competitive rowing is a fine exercise and has the merit of being possible in one's own home without water! A rowing machine is not expensive and represents a really worthwhile investment, but it must be used regularly. The Swedes have an athletic training system known as "Fartlek"—which means, roughly, "speed-play"—this means that the athlete goes out across country, jogging when he feels like it, perhaps sprinting downhill, then he walks a little, stops and does a few exercises on a windy hill, climbs a wall or stile, and generally covers a good many miles in a thoroughly enjoyable fashion. It seems that a very good replica of this method of training, and one that can be eminently suitable for the older man, is to go beagling! This sport is the pedestrian equivalent to the hunt—a pack of hounds raise a hare and the crowd follow on foot, running through bogs and hedges if they are

young and enthusiastic enough, or merely walking briskly and occasionally stopping to see if the hounds are coming back your way; the use of a shooting-stick can make the walking easier and the resting positively enjoyable! Even a good, regular walk along country lanes or through a park or common will do wonders.

Golf and tennis can be played and comradeship achieved at the same time as fitness, but everyone does not have an innate aptitude for such technique games. However, to walk around the average golf course means that a distance of at least five miles has been walked; following the peregrinations of the little white ball can add quite a lot more to that distance, particularly if one does not direct it specially straight—and, to be quite frank, how much easier it seems to walk five miles in the company of a friend following that ball than to set out deliberately to walk five miles accompanied only by one's thoughts! Golf also possesses the advantage of being able to be played on one's own, although such a practice might well cause the player to develop a "snatch" when playing the ball as he looks up to see where it has gone. Swimming and cycling have the same advantage, and the former is possibly the easiest and most readily available method of attaining and maintaining reasonable fitness standards for the average older man. Bowls and racquet games, such as squash and badminton, are both fine ways of getting fit, but the former, although not necessarily any less lacking in skill, is considerably less strenuous than the games played with the small ball.

The ability to make, and keep on making, rapid and accurate movements declines steeply in early middle age. On the other hand, the older man may claim that his experience and practice make up for any loss of mechanical dexterity.

## EXERCISE FOR THE OVER-FORTIES

When older men outlast younger men in stamina and ability, it is due to the fact that the veterans have taken the trouble to keep themselves fit, and have carried out physical exertion continuously over the years so that they remain accustomed to hard physical work.

Fitness means satisfactory adjustment to one's environment—this must be of great interest to men of all ages, but more so to the man who may have to combat older muscles and decreasing demand for physical exertion. Often the demands of life create an unusual environment, for which the achievement of physical fitness is essential, but it means hard training and great mental application.



## CHAPTER SEVEN

### FITNESS THROUGH GAMES

It may seem that playing one or more of the many sports that abound in our community is the answer—a pleasant way of taking the exercise one usually forgets is by means of outdoor games, one of the greatest of physical and mental stimulants.

Research carried out in the Physical Fitness Laboratory of the University of Illinois indicates that group games and sports have comparatively little value in physical conditioning and improving one's internal efficiency. Such games as volley-ball were used in their experiments, and measurements were taken by the Schneider Test, a "yardstick" measurement of physical fitness. Individualised exercise programmes gave remarkable gains; such a programme included jogging, swimming and using a rowing machine. Still greater improvement was made by a group who were given weight-lifting and some endurance work. Gains made were :

Breath-holding 11.3 per cent.

Pulse-rate 11.5 per cent.

Lung capacity 27.6 per cent.

Swimming gave a high percentage, and in exercise sessions swimming movements were used that employed the muscles used in actual swimming. Adults who enjoy group games should realise that they will get out of exercise exactly what they put into it. If it is being done for fun and social life, then group games are fine; but if men want physical improve-

ment then they must take individualised courses of training.

For the average, sedentary man in early middle-age, this physical fitness business does not come easily; he has become accustomed to a pattern of life compatible with his business and domestic responsibilities so closely knit and organised that he lacks any space in the crowded programme for a few minutes' regular, daily exercise. However enthusiastically he may begin such a procedure, it will quickly pall and become sacrificed to something of apparent immediate importance but, in a long-term sense, trivial to an extreme. However, it is possible that he would make available a longer set period as a weekly routine—say, for example, a Saturday afternoon for a game of golf.

That choice was not by accident, because it is quite possible that golf is the easiest, most convenient and effective means of acquiring a reasonable standard of physical fitness within the reach of the average man. It is certainly one of the most pleasant means, as anyone who has strode over yielding, springy turf on a bright spring morning towards his little white ball nestling in the closely cropped brilliant green grass of the fairway will testify.

It has already been stressed that exercise in the fresh air has obvious advantages over its indoor counterpart, so golf more than qualifies in this respect. It has the merit of being an organised game so that the player only has to acquire the necessary kit and transport himself to one of the many courses in his area (few men live more than three or four miles from a golf course of sorts), and his exercise is laid on at his immediate disposal. There are also social facilities which accompany the game that are outside the scope of this discussion, but which bear a distinct connection with the attainment of relaxation and freedom from tension.



The various attributes of physical fitness have been listed already—some bearing on golf can be discovered in each one. Agility, lightness, balance, stamina, endurance, and judgement—all are necessary for successful golf, and all are encouraged by the basic movements of the game and the very walking around the course that provides the game's foundations.

Let us consider at greater length the most elementary part of golf which, even if carried out without hitting a single ball, would in some measure give a man a reasonable standard of fitness—that of walking around the golf course. Few men could arouse the enthusiasm to walk three and a half or four miles voluntarily on a Saturday afternoon, alone but for their thoughts; perhaps the company of another walker might be an encouragement, but conversation can soon flag and, whilst one walk might be interesting, two, or three, would become a bore. But golf gives the walk, the companionship, occasional conversation, plus a general exercising of other parts of the body in a relaxed and enjoyable fashion.

Walking was probably the first athletic effort of Mankind—it is certainly the simplest. The most famous footprints ever were undoubtedly those seen by the marooned Robinson Crusoe on the beach of his desert isle—those naked footprints on the sandy shore have never been washed away by time or tide. There is a singular thrill at being the first to leave footprints on virgin snow or on the level stretch of damp sand left by the retreating tide, feeling somewhat daring and almost sacrilegious at spoiling the unsullied expanse. It is even a relief if a fresh fall of snow or an advancing wave obliterates one's tracks throwing Destiny off the scent once and for all!

Apart from courting and service life, there are few occasions when keeping right in step with other people does not bring

frustration and boredom, to say nothing of aching feet. Most of us are happiest walking in our own way, at our own pace, which is highly individual—the more spontaneous we can be in our walking, the more we shall enjoy it! Most of our habitual movements express our personality in some way; one's gait is said to be highly individual and to be one form of self-expression we cannot alter or disguise. Gait depends upon a number of physical factors—the height and weight, the physique and relative lengths of thigh, leg and foot. One's age and state of physical health can also affect the gait considerably, so much so that the experienced doctor can, at a glance, diagnose the illness of the patient as he walks towards him across the surgery floor.

Old people walk with short, unsteady steps, the toddler with his feet widely separated and also unsteadily, as does the drunken man on his wide base and swaying from side to side. The elderly arthritic patient has a waddling gait, the man with a spinal deformity or shortened leg has an uneven, one-sided way of walking, whilst there are gaits characteristic of neurological disorders or some forms of polio. Weakness due to illness or fatigue can produce a drunken, unsteady gait, but even ill, drunk or exhausted men seem able to co-ordinate their muscles well enough to walk. Soldiers have been known to fall asleep on their feet during a long, exhausting forced march and yet keep pace with their comrades. One's mood and emotional state also affect one's walking; hurrying makes it brisk and decisive, idleness or time-killing produces a shuffling, listless gait.

Yes, walking is a many featured action—but it is the easiest known form of physical training, and, as such, forms a reliable basis for recommending that the sedentary, unfit man, sliding reluctantly into early middle-age, should bring a

revolution into his life through a little white ball, some wood and metal clubs and a canvas bag.

A method of training akin to golf but of a more leisurely nature is that of strolling, a term applied by race walkers to the type of walking exercise undertaken in slacks and pullover as an adjunct to routine racing training in athletic kit. To reach the peak of physical fitness, four essential conditions are necessary :

1. Cleanliness and freedom from fats of the digestive organs.
2. A strengthening of the muscle groups which, in the course of arduous work, will be under heavy stresses.
3. A course of mobile exercise to perfect and co-ordinate movement into a fluid operation.
4. Some form of competition with one's friends or oneself (in the form of increasing distances and times, etc.), to exercise and regulate the expenditure of nervous energy.

Each of these four groups can benefit from a course of strolling, but not all in the same manner or degree. The first two can receive direct benefit from the action and can be attained by strolling only if taken frequently and for periods of fair duration. For one who has had a "lay-off", this is by far the best method of getting back into trim, as it starts in the right place, by cleansing the system, toning up the liver, getting rid of internal fat, and generally promoting healthy digestion. At the same time, no undue strain is placed upon the muscular system at a stage when, with indifferent body tone, it might prove disastrous to undertake more heavily stressed movement. Three periods of strolling during the course of a week should do much good as a preliminary to more active training. Two of these can either be of one to two hours' duration and the other perhaps a little longer, at a

speed of about four and a half miles an hour for all of them. All strolling should be enjoyable, the pace should be regulated within reason to keep the body warm but not over-heated, and it should be discontinued at any time that sufficient heat cannot be generated to maintain comfort as it will then have lost all benefit.

One of the most stimulating and pleasant forms of attaining physical fitness is a Swedish system known as Fartlek (a Swedish word meaning "speed-play"). In this method, a man who uses this type of training does most of his exercising in the form of easy running in the woods and over the hills and dales. He goes out each time without a set plan and thinks in terms of being out for a certain length of time rather than running certain distances at pre-determined speeds. A Fartlek workout can last from one to two hours, and the subject mixes his work as he finds it suits him—his motto being "run farther, run faster—but don't get tired". In Fartlek training, a man is on the move the whole time, and so he runs further than most men would do in the same time. As to "don't get tired", the man who uses this type of training eases down before he gets too fatigued; moreover, he spreads the work of the afternoon over a longer period of time. A typical Fartlek pattern is as follows :

1. Warm-up with an easy jogtrot of from five to ten minutes.
2. Then ease up into a reasonable pace and try to keep going, without hurting yourself, for half a mile to a mile.
3. Now break into a brisk walk and continue for about five minutes.
4. It is time now for some faster work—wait until you definitely have the wind at your back or until you are

descending a gradient, then break into an easy run and sprint hard over about twenty-five to fifty yards; continue this routine until slightly tired, and then :

5. Run easily, taking four or five fast, short steps occasionally—tilting the trunk forward on each acceleration.
6. Now take the hill in front of you at full speed, then :
7. Break into a brisk walk for about five minutes.

Repeat the above until the end of the time you have allocated yourself.

Fartlek is used in one form or another by almost all the great runners of today—some do not work at all on a track except when they compete on it! The good things about Fartlek are :

(a) A man gets in far more active exercise in the form of running than he would do otherwise, and running is one of the finest and certainly the easiest ways of getting fit.

(b) It combines speed and endurance work.

(c) Training over the softer ground of the countryside is easier on the legs; they keep their suppleness and spring and do not hold aches and stiffness.

(d) A man is able to take a hand in mapping out his own training.

(e) It does not require elaborate or expensive equipment—merely a pair of gym shoes, a track suit, or pullover and pair of trousers tucked into the socks.

(f) It is not restricted by reason of lack of space.

(g) Everyone can find some sort of parkland or countryside within easy reach over which to do this form of training.

(h) It is far less monotonous than almost any other form of training—as a result of this a man does far more work without

realising it, and he stays with the programme without getting bored as time goes on.

It is hard to describe the wonderfully healthy, glowing feeling that a man possesses after he has come in from jogging over soft grassland in the early spring sunshine, had his bath or shower, and now realises that he has really done something intelligent and tangible towards bringing himself to a state of real physical fitness. In the author's mind, and in his personal experience, Fartlek stands head and shoulders over all other forms of training, both for its pleasure and results.

The sensible man will not cease taking part in sport when his schooldays finish, even if he only plays an occasional game of tennis or swims a few lengths of the baths. If such participation in games is not possible, then regular exercises should be carried out at home or in a regular P.T. class. It must be borne in mind, however, that continuity is vital—there is no one like the trained man for rapidly going to seed once he takes things easily—the finer-toned the muscles the sooner they turn to fat!

## CHAPTER EIGHT

### EXERCISE AT YOUR DESK

Bodies rust, they don't wear out! It is a process that can be prevented, cured, eased and postponed by methods which make one feel good as they do their work. Life is the toughest of all competitions and requires strength, endurance, energy and a high degree of protection from strain and injury. Only a fit body can provide those necessary items; just as the athlete trains for his sport, so must the average man realise that it is necessary for him to "train" so that he can successfully cope with the burden and challenge presented by life itself.

It is not important whether or not a man can swim a mile, run fast or be able to perform impressively on gymnastic apparatus. But it is important for him to be physically fit enough to carry on his normal daily activities comfortably, and to have an adequate reserve for emergencies. It seems that increased business and domestic strife bother those who are physically unfit; their problems loom larger because they "don't feel well". This is reflected by their inability, through sheer tiredness, to be pleasant and sociable in their offices and homes; they are generally irritable and "edgy", so that they are dull company. They have the tension problems that lead to high blood pressure.

Even though a woman has probably worked twice as hard, both physically and emotionally, with household tasks and

with children, she often has more ambition and energy to do things than her husband—he is too tired from his day of labour sitting at a desk. This indicates that women probably have superior “built-in” fitness standards—they live longer, on average, than men, too!

Health is an ingredient of physical fitness and should not be confused with it; health is primarily freedom from disease. Because of a highly developed Public Health programme and medical science, Britain is a healthy nation, but it is not a fit nation—in other words, although Britain is comparatively free from disease and sickness it has a relatively low standard of physical fitness. This low standard has reached a level sufficient to create apprehension among those who believe that fitness is one of the most important factors in modern living.

Because work takes up more and more of a man's time, he finds that he has less and less time for regular exercise and recreation. It then becomes essential for him to take stock of his daily habits of standing, sitting or walking so as to avoid slipping into sloppy, lazy habits and body movements which may well affect his general health standards and his physical functions. There are certainly limits to the amount of physical activity which mature adults can perform, limits even more restricted for those with health problems. Realising that physical inactivity is the real enemy, the life of the body should be sustained as it is meant to be—by planned and progressive exercise. These exercises should not be visualised as some physical culture faddism or ideas of cranks, but as a necessity of life itself.

The first, and a major, snag which is encountered when one contemplates an exercise programme is the difficulty of incorporating it in one's daily life pattern. Our lives are so



## EXERCISE AT YOUR DESK

organised and so full that it is not easy to squeeze in a regular, daily routine. To counter that thought—to dismiss it, in fact—here is a daily physical fitness programme which can be completed in under ten minutes! It does not require any apparatus, it does not involve any complicated or intricate exercises—those listed below have been specially chosen to fit the basic needs of the average sedentary worker. How about trying it?

It begins before the subject even gets out of bed—its opening activities being designed to help him awake; in addition they form a “warming-up” procedure for what is to follow.

Watching a cat wake up from a nap is always interesting, because of the manner in which the animal luxuriously and extravagantly stretches itself—and cats can be pretty active, can't they? So, like the cat, let us give our whole body a thorough stretching in a slow and easy manner. Reach for the ceiling with the hands, then thrust them slowly out to each side, stretch them in every possible direction. Then the legs—point the toes down to the very furthest reaches of the bed, then pull the knees up to the chest. Twist and turn the body, arch the back. With slow and comfortable ease stretch in a relaxed fashion. The stretching procedure completed, lie motionless on your back for a minute, sinking into the bed, relaxing.

The stretching routine will stimulate the circulation, ease tension, and generally invigorate the muscles.

Still in bed and lying on the back, let us do some “Stomach Pumping”. Take a deep breath, pull in the abdomen as far as possible; hold it well in for a second or two. Then puff it up as far as possible, making a big mound in the bedclothes. Hold that for a second or two, then pull it in again. Carry out the alternate pulling-in and puffing-out as a pumping action, starting slowly and increasing the speed of the action

gradually. Pump away until out of breath and then relax; breathe easily for about ten seconds and then repeat the procedure several times.

This pumping drill does several important things:

1. It brings the blood from the stomach area, where it is stored, and disperses it all over the body, thus sending fuel to the muscles.

2. It stimulates and rids one of that "early morning" sluggishness.

3. It exercises and tones up the abdominal muscles and organs. When the abdominal muscles lose their tone or elasticity, then the mid-section area sags, resulting in a visible paunch and also faulty posture leading to malfunction of the abdominal organs.

4. The abdominal muscles play a big part in pumping the blood to the heart—if they are doing their job well then the heart's task is made easier. You will find yourself standing and sitting in a better posture after doing this exercise for a week or so; your muscles are holding your mid-section in place. It is a good exercise to do at any time when feeling sluggish—it can be done sitting at a desk!

Now, get out of bed—begin to jog-trot on-the-spot. Take it easy, lift the knees only about six inches in a make-believe run. Jog for thirty seconds, then walk easily around the room for fifteen seconds, then run again, resting every thirty seconds until you begin to feel a little puffed; then cease the exercise. Every three or four days try to add another thirty-second section of jogging until that part of the exercise programme has been built up to about three or four minutes. You can run a little longer or a little faster, but you should always stop before getting noticeably tired.

This jogging gives the heart and lungs a reasonable basic

## EXERCISE AT YOUR DESK

work-out, besides generally stimulating many other functions of the body. It has a noticeable beneficial effect after a few days when you will notice that stairs don't seem so steep, that your whole body feels lighter, and you get an inclination to run when you are soberly walking!

When you are breathing normally again, go and stand against a wall in a relaxed position. Take a deep breath and, as you draw the air in, tighten every muscle of the body—clench the fists, tighten the jaws, lock the knees, tighten the leg muscles, make the abdomen hard like a rock and puff out the chest. Hold this position for three or four seconds, and then let yourself collapse as you noisily expel your breath. When you collapse, let your knees give a little, let the head drop forward and the arms drop to the sides. Let yourself hang loosely as though suspended from a nail on the wall. "Hang" like this for a few seconds and then repeat the drill—do it six or seven times.

This muscle tensing-and-relaxing not only improves muscle-tone, but it also teaches relaxation and can be used also as a tension-relaxant at any time of the day.

Finish off the programme by jogging as loosely as possible, like a rag-doll, for fifteen to twenty seconds; then off to the bathroom for a glass of cold water and the usual ablutions.

Of course, there are many other things which can be done to raise your fitness standards—but the main concern is to get some sort of programme inserted into your daily routine. But, remember, if you are over forty it is necessary to preface any sort of fitness programme by a visit to your doctor who will clear you for such physical activity.

As an early morning exercise programme, this one is hard to fault—it is certainly vastly superior to the older idea of flinging open the window, shivering as one took a few hasty

gulps of chill early-morning air and then forced one's reluctant body to bend dangerously forward in a toe-touching routine. As a practising physiotherapist, the author can state with complete confidence that the quaint and typically English idea that no man can be fit until he has touched his toes a certain number of times each morning, is responsible for more slipped discs than one can count!

Worthy of consideration is a "new" American method of presenting an old form of muscle-building called ISO-METRICS; it is claimed to be the art of toning up the muscles without undue exertion. Technically termed "static muscular contractions", it is the exercising of a muscle group against an immovable object, one supporter claiming that "all you need is a chair, a heavy desk, or a table and one minute a day". Possibly credulous Americans feel that they are getting their daily "physicals" in sixty seconds flat, resulting in paunchy executives pushing upwards with the fingers placed under their desk-tops and flabby housewives trying to make their thighs more firm by standing with feet apart and pulling the thighs towards each other for six seconds at least three times a day.

Isometric exercises particularly attract the busy man because of their apparently short action periods, and because they can be performed at odd moments of spare time. In the car, the stomach muscles can be tightened by forcing the abdominal muscles outwards whilst halted at traffic lights; squeezing the steering wheel as hard as possible helps the wrists and arms. Sitting at the office desk one can perform a routine which will benefit almost the entire body, thus:

For the waist and abdomen. Sit with legs held together and extended straight out. Bend forward and grasp the legs just below the knees. Press down with the hands, at the same time

## EXERCISE AT YOUR DESK

*To improve the waist and abdomen.*

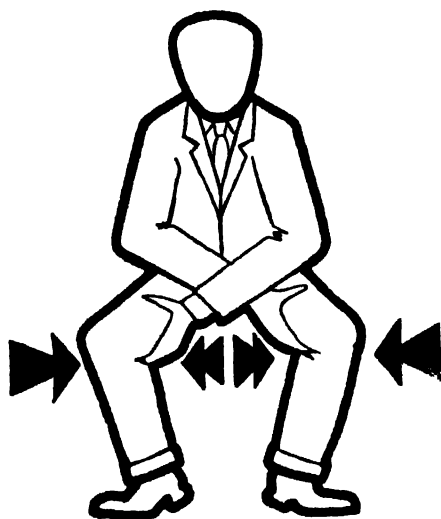
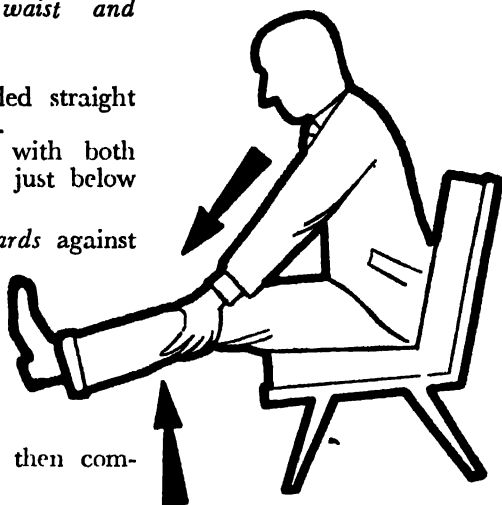
### *Stomach Tightening.*

Sit, with legs extended straight out and held together.

Bend forward and, with both hands grasp the legs just below the knees.

Press both legs upwards against the pressure of your hands, at the same time pressing strongly downwards with the hands.

Hold to the count of "five" and then completely relax.



*To improve the muscles of the legs and chest.*

Sit—on the floor for preference—with knees crooked up and feet six inches apart.

Bending forward, place the palms of the hands against the insides of the opposite knees

Press strongly *inwards* with both knees simultaneously—at the same time press *outwards* with both hands.

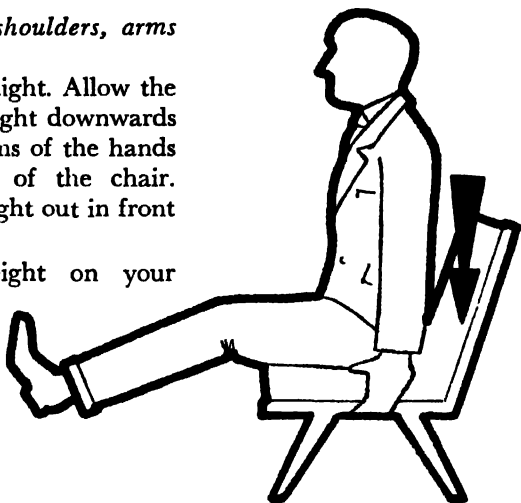
Hold to the count of "five" and then completely relax.

## BE FIT AT 40

*To improve the shoulders, arms and abdomen.*

Sit, with back straight. Allow the arms to hang straight downwards and place the palms of the hands against the sides of the chair. Hold the legs straight out in front of you.

Taking your weight on your hands, attempt to raise your body off the seat of the chair. Hold to count of "five" and then completely relax.

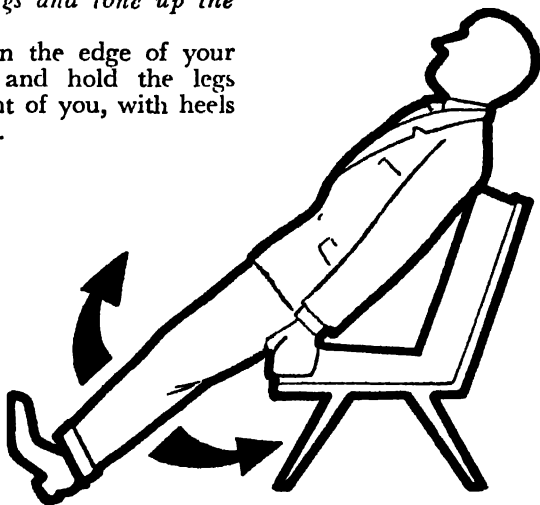


*To improve the legs and tone up the abdomen.*

Begin by sitting on the edge of your chair; lean back and hold the legs straight out in front of you, with heels resting on the floor.

Rest one leg on top of the other and press them tightly together. Keeping the legs perfectly straight—try to pull your feet apart without raising the heel from the floor.

Hold to count of "five" and then completely relax.



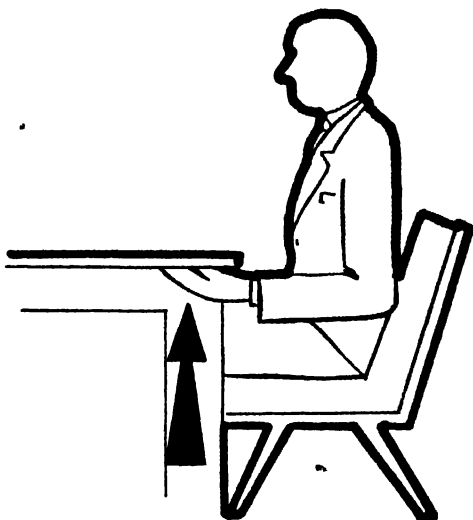
## EXERCISE AT YOUR DESK

*To improve the upper arms and shoulder muscles.*

Draw chair up to heavy desk or table. Sit straight, with hands (palm uppermost) under top of desk; forearms parallel to desk.

Push the hands upwards as strongly as possible.

Hold for count of "five" and then relax completely.



pressing up against the hands with both legs. Hold for six seconds.

For shoulders, arms and abdomen. Sit with straight back, lean forward and place the hands, palms down, against the sides of the chair. Hold the legs straight out, attempting to raise the body about one inch off the chair. Hold for six seconds.

For the legs. Sit forward on the edge of the chair, hold the legs straight out. Rest one leg on top of the other and hold tightly. Rest the feet on the floor, keep the legs perfectly straight and try your hardest to pull your feet apart. Hold for six seconds.

For the upper arms. Sit straight; grasp the underside of a heavy desk or table with palms up, forearms parallel to the desk. Push up as hard as possible for six seconds.

When no one is looking, sit on the floor and improve your chest and legs. With the feet four inches or so apart, bend

*forward and place the hands against the inside of opposite knees. Attempt to press knees together, while at the same time holding them apart with the hands. Hold for six seconds.*

Or get a reputation for being a bit odd by attacking your paunch with stomach-pumping—breathe in deeply, pushing the stomach out as far as possible and holding thus for one second. Then breathe out and pull the stomach in as far as it will go, holding it there for six seconds. Repeat this sequence six times a day.

Like all other forms of exercise, regularity is the keynote—the exercise sequences have to be repeated daily, without fail, in order to be effective. Reports have it that they work very well—to end on a heartening note one reads of the man who pulled his stomach towards his spine and held it there for ten seconds, five times daily, and being able to report eventually that his waistline had been reduced by two inches!



## CHAPTER NINE

### CAN EXERCISE BE HARMFUL?

“Some people prescribe frequent and violent labour and exercises . . . , the most forbid, and by no means will have it go farther than a beginning sweat, as being perilous if it exceed.”  
—ROBERT BURTON.

The reaction of the human body to the effects of relatively strenuous exertion, not only in youth and early manhood, but also in early middle age, has long been a subject of interest to everyone concerned with the promotion of health and of physical fitness. Many observers, both in ancient and in more modern times, have pointed out the dangers (alleged) of such activities, some seriously and some with tongue-in-cheek, as when Sir Adolphe Abrahams, Medical Adviser to many British Olympic Teams, was quoted as saying: “When one feels the urge to take exercise, one should lie down until the feeling passes off.”

It is the effect of exercise upon the man over thirty-five years of age that we are considering; it has a touch of romantic martyrdom to visualise the older athlete straining with everything he has got to reach the tape first, and then suffering for the rest of his life as a result of his heroic efforts. But it doesn't happen like that—Dora Johnson, who achieved fame by collapsing near the finish of the 1908 Olympic Games marathon, lay between life and death for some time after the race, but he was completely well the next day and went on to run a lot more marathon races! The death of a former champion

athlete from any other cause than old age immediately becomes news and focuses attention and public opinion on the so-called dangers of sport. The Jeremiahs, shaking their heads mournfully, connect two quite unrelated circumstances so that it is recalled how he "chased around the world playing tennis for years", whereas the man probably died of a liver condition brought on by activities far removed from tennis.

The effects of physical exertion are felt by every part of the body, but the cardiovascular system (heart and circulation) is usually regarded as bearing the chief strain of athletic activities. One would be shocked if told that a small child was being forced to shovel a ton of coal from one bin to another every day of the week—such an amount of work would appear to be far too much for a child. Yet, this is approximately the amount of daily work done by a small, muscular organ weighing just ten ounces—the human heart. During strenuous physical work this amount of labour increases many times. The obvious questions are—firstly, can exertion cause direct damage to any of the organs of the body, particularly the heart? and, secondly, does exertion in some way that is not immediately obvious, cause trouble in later life which may result in premature death?

A statistician recently claimed that most athletes died before they reached the age of fifty. Investigations proved that the "athletes" he picked were overweight strong men and acrobats, many of them in their later years having shown a marked affection for the bottle. A good deal depends upon how the athlete lives when the brief years of his sporting career are over. If he keeps up moderate eating and drinking coupled with a love of outdoor recreation, his chances of living long are better than most. If, on the other hand, he develops a passion for the nineteenth hole, allows his body to

## CAN EXERCISE BE HARMFUL?

run to fat, then, like every other fast liver, he is likely to die before his time. To have won the hundred yards in ten seconds twenty years before does not protect the boozier from the bleary eye and the hardened artery.

When a player drops dead on the playing field and resulting investigations reveal heart failure, it does not mean that the exertion of the game caused the condition. Rather, it indicates that he would have died suddenly anyway, possibly climbing stairs or chasing after his dog. The so-called "Athletes' Heart" does not exist, simply because the heart of the athlete is increased in size and musculature directly in proportion to the size of the man's skeletal muscles. Whatever the size of one's muscles, an athlete's ability to perform muscular work is governed by the output of the heart. Any dangerous pathological condition of the heart can only follow a heavy burden being placed upon a heart which should never have been called upon to bear such a load. In other words, where an unusual stress is placed upon an already damaged heart, then trouble may follow. Sir Adolphe Abrahams has stated quite conclusively that the healthy heart does not suffer from strenuous exertion, an opinion so backed-up by other "giants" of the medical world as to be incontrovertible.

During recent years a great deal of work has been done, partly in this country but largely in America, to answer the question of length of life being affected by exercise. By means of investigations into the life histories of athletes of former years it was found that university sportsmen had an advantage, according to one computation, by as much as five years when comparing the life-expectancy of athletes with that of males in the general population. There are certain variable factors which need to be taken into account, the influences of inheritance cannot be neglected, whilst variations in physical

development affecting the height-weight ratio are known to play a part. The period of life when really strenuous activities are undertaken is usually a limited one, and subsequent factors such as the economic situation, occupation, and, in particular, habits as regards the intake of food, alcohol, and tobacco, affect longevity quite apart from the more direct influences of certain diseases. The psychological factors which attract men to take part in strenuous and sometimes hazardous pastimes are often not wholly satisfied with such activities, and sportsmen are more inclined to live dangerously than their less energetic neighbours. These investigations produced some evidence that the prospect of long life for the heavily built men was not so good as it was for those more lightly built. No evidence could be adduced from the information available that cardiovascular causes of death were more prominent in the sportsmen or that they occurred at an earlier age.

In a morbid way, it is true to say that we begin to die from the day we are born, but the first faint shadows of senility do not approach until about the age of thirty. The ability to make, and keep on making, rapid and accurate movements declines steeply in early middle-age. On the other hand, the older man may claim, with some justification, that his experience and practice make up for any loss of mechanical dexterity. Champions in sports requiring endurance and skill do not reach peak form until they are about twenty-five years of age, as a general rule. The physiological reason for this lies in the fact that muscles can set free energy from movement by two different mechanisms :

1. An explosive mechanism which enables a great amount of energy to be released in a few seconds.
2. A steady mechanism which doles out energy to the

## CAN EXERCISE BE HARMFUL?

muscles sparingly so that they can continue to work for a long time.

In human beings, mechanism number one begins to deteriorate in the early twenties, so sprinters and jumpers who depend upon it soon show signs of slowing up. It would seem that sprinting needs the exuberance of youth. If an athlete keeps on strengthening his heart and lungs by regular, progressive training, then mechanism number two becomes more efficient. Thus, a marathon runner may not reach his peak until he is about thirty and will then continue in the top-flight until well into early middle age. Any type of sport not dependent upon the explosive mechanism can be bettered by an increase in personal skill.

The more violent forms of exercise are mainly performed by the young, for the circulatory system tends to lose its flexibility, together with that of the muscles, as the years advance. It is not realistic or safe for a man to COMMENCE arduous, fast and prolonged or highly competitive sport once he has reached the age of thirty-five UNLESS he has taken part in that, or a similar sport, continuously during his younger days. After the age of forty, men should modify their exercise in the direction of less strenuous competition or in activities where sheer physical stress is replaced by relatively psychological rivalry.

It is not a pleasant sight to witness the middle-aged weekend athlete, with his ill-concealed paunch, literally running himself into the ground in his efforts to prove, both to himself and to the world, that he is only a bit as good as he ever was! Lacking the physical foundations which should have been laid down in his youth, or sadly missing their benefits through his failure to maintain such efforts consistently, he finds that the available twenty-four hours in every day are

insufficient to train his creaking muscles or adjust his sadly over-worked heart to cope with the added strain. So, he just carries on dangerously deluding himself that he can regain his lost youth by running berserk every Saturday afternoon.

A man who misuses his working hours misuses his leisure hours too. He stays late at the office or takes home a loaded briefcase; a perverted conscience comes between him and his light reading, his temper suffers and contaminates his domestic life. Home worries then follow him to the office and so close a vicious circle. Such exercise as the man takes is likely to be harmful rather than beneficial. On working days, he hardly walks a hundred yards, at weekends he tries to crowd his recreation, as he does his business, into the shortest possible time. Bursts of violent exercise in an otherwise physically passive life are suicidal. Such a man cannot be simply advised to take up fishing, for example, because it is restful—an irritable temperament will not be soothed by the tedium of waiting for a bite!

One of the most popular legends of sport is that the legs "go" first, that the runner entering the third lap of the mile with faltering strides, the boxer coming up for the sixth round with rubbery legs, and the footballer who finds that he is lacking the spring of his youth—all blame the effects of encroaching age upon their leg muscles. This is not the case—the lungs provide the oxygen needed for the high-speed functioning of the body; great lung capacity is needed for effective body-functioning, and the athlete who finds his legs becoming strangely weak isn't wrong. But it is not the muscles of his legs that are betraying him, it is the lungs that feed the oxygen to those legs! If a sportsman keeps on the top-line into his forties, it is not his muscles which are keeping him there but first-rate lungs. The New York Coroner's staff, having performed more

## CAN EXERCISE BE HARMFUL?

than 4,550 autopsies on the bodies of men over the age of thirty, found that, in almost every case, the lungs were detrimentally affected in some measure.

Every man needs exercise and training, but it must be systematically and intelligently progressed and planned so as to be compatible with his age, physique, background, and the time he has available for that exercise. There is no physical reason for a normally healthy man in early middle-age, once he has received the "go" signal from his doctor through a preliminary medical examination, to fail to "re-train" himself gradually back into good physical condition. He must progress slowly, rather in the way that a person convalesces or undertakes remedial exercises after an injury or illness. By this means, a sensible man will become aware that his age should be regarded physiologically and not chronologically—in simple language, he is as old as he feels! Tension and lack of planned exercise are far more likely to harm a man than all the physical exertion in the world!





## CHAPTER TEN

### ARE YOU TOO FAT?

At some time or other in their lives most people have looked ruefully at themselves as they put on bathing trunks and have considered whether or not to try to lose weight. A large number of them never bother, others begin and don't stay with it long enough for any impression to be made on the surplus poundage, a few have the will-power to go through with an adequate diet and some sensible exercising, and feel considerably improved for their efforts.

What is the best weight for an individual? Everyone has a "best performance" weight, a weight at which he will be at his physical peak, and any sudden rise or fall in that weight almost invariably denotes the approach of staleness or lack of training. The weight of his body is a man's visible proof of his organic development, but it must be remembered that two individuals of the same skeletal size may also weigh the same but be vastly different in their respective proportions of muscle, bone and fat. A man's weight must, therefore, be considered in terms of the various tissues, allowing that a man needs adequate musculature to handle the body-weight plus the bony skeleton in an efficient fashion.

A moderate amount of adipose tissue is needed for protection against sudden changes of temperature, serving as a cloak to retain the body heat and also as an energy reserve. But, too much of this adipose tissue is a sure sign of poor physical condition, and, in young men, strength tends to diminish as fat

increases. A man may be five per cent overweight and be in a very healthy condition, showing that the body is well nourished and has more than enough of the materials it requires for maintenance and repair. But more than five per cent is dangerous, proportionate to the percentage a man is overweight. To avoid this dangerous condition or to improve their appearance, many people attempt to reduce their overweight, normally using the methods of diet or exercise, or a combination of both.

Men are active in their youth, whilst their bodies are still growing, so that they do not become overweight. During those same years, an adequate appetite is acquired and digestion is in good shape. At the age of about thirty, when growth has ceased and persons normally become less active, the surplus weight begins to accumulate. The time for a man to regulate his life has now arrived, the time to adjust things so that he does not carry around a surplus forming a dangerous burden to the heart. Every pound of fat requires 4,500 feet of minute blood vessels to maintain it! A little surplus fat is a healthy condition; it is not wise to be too finely drawn to resist such emergencies as an illness or injury; reserve energy in the form of fat is stored on the body. Whilst it is sometimes a good thing having such a surplus, it is important that the life be conducted so as to strike an adequate balance.

People become too fat or too thin—especially too fat—because they do not eat according to their actual physical needs. This is because they have little or no knowledge of how much food they require to provide their bodies with the right amount of fuel for the particular type of life they are living. The average person realises, in a general sort of a way, that a sedentary person, sitting at a desk all day, needs less food than someone who is more active physically. But very

## ARE YOU TOO FAT?

few men know how to eat according to their physical needs. If an individual is to sustain his fitness level he must control his weight so that he will not only avoid excess poundage but also get enough fuel to sustain an adequate body-weight.

Besides avoiding weight problems, the man who learns how to eat according to his exact needs will also be assuring himself of maximum energy and endurance, and will generally be eating for maximum protection of his health. To do this, it is necessary for a man to find out his caloric needs per day; this depends upon a number of factors, such as age, size, temperament, occupation, time of year, etc., for example, an average man weighing 160 lb., of average height and normal temperament, working in a sedentary occupation, is said to require about 2,350 calories per day. The amount of food a man needs to reach his actual daily requirements depends upon the foods and the beverages themselves—some are higher in caloric content than others. Besides eating to one's energy needs, it is also necessary to eat to one's nutritional needs; this means that foods and beverages must be chosen according to the nutrients they contain.

There are innumerable books and magazine articles dealing with a man's caloric requirements and outlining the caloric content of certain foods in far greater detail than is possible here; they are worthy of study.

Foods are fattening only according to their caloric content; the idea that certain foods turn more easily to fat is incorrect. For example, some people think that butter is fattening; although it consists to a large degree of fat, it will not make a person any fatter than any other food containing the same number of calories. Potatoes are a fairly low calorie food; the average medium-sized potato contains only about 100 calories

—about the same as an ordinary orange. The best practice is to study the caloric content of all the various foods and try to get into the habit of eating those which are low in calories and high in vitamins, minerals and other important nutrients. The only thing that matters at the end of the day, as far as weight is concerned, is the total number of calories which have been eaten.

In cold weather, people burn up more calories because their bodily "furnace" has to work harder to sustain body heat. A man who works out in the cold is able to take in more calories without getting fat, but when a person is on a diet they will lose weight if they stick rigidly to it, regardless of the weather, which doesn't mean that you can eat more in winter! Slightly less sleep than usual will aid in losing weight because calories are not burned so quickly when one is sleeping. Walking uses calories at the rate of about 110-120 per hour, sleep at sixty to seventy per hour. The more active one is when reducing the easier and faster will come the results, which is a point in favour of the exercise/diet method advocated later. There is no need to be hungry when on a reducing diet; the great secret of being able to stick with a diet until you have accomplished your objective is to select enough really low caloric foods so that your diet has sufficient bulk. This aids in preventing you from feeling hungry, which is the greatest single factor in making people give up dieting.

A man is what he eats, and he must not eat too little of the foods that contain the materials his body requires. At the same time, he must not allow this surplus to become too great so that it becomes a dangerous burden. The first warnings of not eating enough of these essential foods are a feeling of fatigue, lack of energy, listlessness, headaches, and spells of dizziness. Many men are so anxious to reduce their weight

## ARE YOU TOO FAT?

that they pay little heed to these warnings—a physical breakdown can result.

It is not possible to lose weight without some form of dieting, which causes the body to live on its own surplus. It is a good idea for a person desiring to lose weight to do so by a judicious blending of diet and exercise, which enables an ample diet to be consumed without the body being robbed of necessities. Excess weight can be shed by following as many of these suggestions as possible, best results following when ALL of them are practised simultaneously !

1. Endurance running, in the form of easy jogging over parkland if possible, but even on the roads is better than nothing.
2. Regulation of diet down to actual caloric needs.
3. Double up on normal physical activity.
4. Exercise in heavy clothes so as to sweat.
5. Relatively cold baths and showers.
6. Reduce the quantity of liquid intake, and add more iodized salt to liquids taken.

Losing weight is not an easy task—it takes the following efforts to lose one pound of body fat :

Walk leisurely 144 miles.

Wrestle for five hours.

Jog-trot easily for forty-five miles.

Do 5,714 press-ups.

These are laboratory figures, of course, and represent experimental tests—but it can be done in the way that boxers, jockeys and wrestlers do many of the above methods when they find it necessary to lose weight in a hurry. It is also a

good idea to begin a course of weight reducing by taking a Turkish bath to eliminate surface impurities.

Hard endurance exercise leaves the subject in good condition, whereas dieting on its own tends to leave him in a physically weak condition and muscularly soft. The choice is a personal affair—one can be fat and ailing at forty or eat reasonably, exercise regularly, remembering that the heaviest exercises bring the best results and maintain your body in a normal condition.

## CHAPTER ELEVEN

### ARE YOU TOO LEAN?

If a man wishes to increase his weight he must make sure it is muscle bulk that he is adding, as most people going on a weight-gaining programme merely add superfluous fat which actually cuts down on their efficiency rather than increasing it. There is more to the business of gaining weight than meets the eye; if a man is keen enough to carry out instructions carefully and enthusiastically, it is a comparatively simple matter to increase his body weight. However, the value of any resulting increase is not necessarily of any importance unless the gain is usable weight in the form of muscle bulk. It is quite possible for a 160 lb. man to increase his weight to, say, 175 lb., but unless it is the right kind of weight he will exchange a loss of speed, reaction-time, endurance and stamina for his increased bulk. It has been demonstrated that even as much as four or five pounds of excess fat will have an exceedingly detrimental effect on a person's mechanical skill, energy and endurance.

Some people are interested in putting on weight so that they can get out of the "skinny" category and look better in bathing trunks; others feel that they would like to put on weight because they reason that this is an indication of good health and fitness. Those of us who believe that they will look a little better because they have filled in a few hollows and rounded out a few angles may find that the excess weight they

carry, if not in the form of usable muscle-bulk, will have a detrimental effect upon their health and fitness.

Anyone without any special reason for increasing their weight should do their best to remain lean; this does not refer, of course, to those who are actually underweight. Such people should do something, naturally, to improve their physical condition but should do so only under the guidance of a doctor because when people are under weight there is usually a physical reason which demands proper medical supervision. It must be remembered that an individual's body weight is largely dependent upon his body-type, temperament, and the life he leads. Therefore, some people, by trying to add body weight, will destroy much of the natural skills and talents they possess in exchange for their added pounds.

Before a man embarks upon a weight-gaining programme he should make certain that he is doing the right thing, and that any such programme is one that will create the kind of body-bulk that will be an advantage to him. A suggested programme is given below.

*Exercise.* Undertake supervised body-building by the use of weights. This is best done by joining one of the many clubs which cater for the weight-lifter.

*Diet.* Go on to a diet schedule which will give you more calories than you actually require per day, make sure that plenty of foods high in the important nutrients are eaten, with particular attention paid to protein foods because of the role they play in building, repairing and sustaining body tissues. To work out how many calories you require per day to keep the weight increasing, multiply your present weight (in pounds) by twenty if you are an athletic type, or by fifteen if you have a sedentary job, then add 2,500 to 3,500 calories per day.

Foods particularly high in calories and also full of the



## ARE YOU TOO LEAN?

necessary nutrients are: cashew nuts, figs, honey, ice cream, cream, whole milk, cheese, whole grain breads and cereals, butter, creamed soups, custards, beans, potatoes. Eat plenty of meat and fresh fruit and vegetables, which may not be particularly high in calories but they are packed full of the necessary vitamins and minerals. A drink taken between meals will help to attain the extra calories—it can consist of eighteen per cent cream, two teaspoonfuls of honey, and the juice of four oranges. Known as the “Block-buster”, this drink, taken by the tumblerful between meals, will really give results.

If a man is going to eat heavily he may run into an appetite problem. A good idea is to go to the family doctor, relate your purpose, and ask for a tonic designed to improve appetite. Some authorities consider a good one to be Vitamin B<sub>12</sub>. If you are a person who is very active, moves quickly and dynamically, then you must slow down—don't walk if you can sit, don't run if you can walk, and generally move around as slowly as you possibly can. The less active a man is whenever he is not performing any necessary physical activity the easier it will be for him to add extra weight. A man on a weight-gaining programme should endeavour to get a minimum of ten hours' sleep every night, with a fifteen or twenty minute rest after every meal. A big effort should also be made to relax, to slow down on mental and emotional activity and to avoid fussing and worrying.

Because of their body-type and temperament, some people will find it easier than others to increase their muscle bulk. But if anyone works at a proper programme regularly and makes certain that there is a proportion of heavy exercise included so that the extra food and general slowing down does not just add excess fat, then they cannot help but make important

increases. Anyone over thirty who is not underweight from a medical standpoint, should try to remain as lean as possible unless there is some reason for increased body bulk. When a man is young a few extra pounds are not too serious, but once a man is over the age of thirty the leaner he is the healthier he will be; he will feel fitter and will live longer.

Allowing that there is a certain degree of importance in both slimming and gaining weight, it must be remembered that the human body is a very delicate mechanism, balanced and intricate; unless any sort of programme affecting it is intelligently planned and supervised, harm can result instead of good.

## CHAPTER TWELVE

### YOUR NEXT PROMOTION MAY KILL YOU!

Give the average man a position of responsibility in which he frequently has to dwell upon the importance of taking a decisive step, or feel a particularly strong desire to get a point across or encounter peaks of stress or excitement—then he will often begin to suffer from tension. It might occur when he gets to his feet to make some important remarks, or even when confronted with a momentary economic snag; it can spread to the home and occur when a domestic crisis arises. Everything around him encourages him to be tense, beginning with the fringe of edginess caused by driving to the office; he has to cope with the increased tempo of modern living, the anxiety and over-stimulation caused by its competition, its economic factors, domestic stresses, plus beyond-his-control political and international situations.

He has a meagre consolation of knowing that he is not alone in his condition, that his tension is the most common occupational hazard of busy Mankind; it not only interferes with his functional ability, but it also spoils his enjoyment of his work, impinges upon his social and domestic happiness and represents a really serious threat to his health; it can even play a vital part in curtailing his length of life.

The by-products of tension are many and dramatic, beginning with digestive upsets and elimination problems, running through hypertension and increased blood-pressure which is hard on the heart and cardio-vascular system, causes

functional inefficiency through undue fatigue and resulting irritability. Business-wise, it causes a hectic mental attitude to develop, making it difficult to arrive at decisions or to analyse and perceive mistakes; it leads to a simulated "speed-up", bringing the feeling that there is insufficient time to cope with everything—that there is too much to do. A tense executive cannot have a relaxed staff; he cannot control them because his irritability and sense of having too little time makes him guilty of brusqueness and incapable of handling mistakes and problems; in time his staff fight shy of him as a confidant and a leader. In the field of personal relationships, the general state of disorganisation brought on by tension creates that very same feeling in associates; by making everyone else uncomfortable and ill at ease he is hard to like; it is difficult to admire the tense individual, particularly when he is directing one's activities, thoughts and emotions!

Tension ruins the perspective, causing a man to worry too much and to be over affected by the slings and arrows of outrageous fortune; in his state of tension he cannot help but magnify relatively unimportant situations and circumstances. He finds it difficult to stop carrying his job around with him all the time, and that it is impossible for him to ease up during periods when he should be engaged in family activities or indulging in his hobbies.

Some men are fortunate in that they can adopt an attitude and philosophy that eliminate over-anxiety to do well, or at least eliminate the over-concern involved. It is possible to develop a perspective which makes it easier to live in our highly competitive community, but it is unlikely that an easy-going philosophy is going to be the answer to tensional problems. A doctor can be consulted and the tension allayed by sedation, but sedation is only a crutch and a palliative, not a

## YOUR NEXT PROMOTION MAY KILL YOU !

long-term cure. Then there is the temptation to give it all up and become a beachcomber; getting out of one's habitual occupation and life may be the answer to tension problems, but it is merely taking a man out of a field in which he would fundamentally prefer to remain.

No, it is important, even vital, that steps should be taken to improve or sustain efficiency, protect the health and the enjoyment of work and recreation through the development of tension control. In a number of corrective possibilities, the most practical solution seems to be to learn to control the development of over-tension and thus prevent harmful and efficiency-spoiling reactions by means of relaxation techniques. By learning to recognise one's tension quickly and by learning a relaxation technique, the subject will eventually be able to relax automatically when such moments occur, instead of following the usual pattern. Most tension problems reflect themselves in muscular spasm, their cure lying in a muscular ability which enables a man to relax and control his tension. Basically, the process takes the form of a man knowing when he is tense and how it feels; he then becomes able to control and ease this tension by consciously creating his own tension, following it with a purposeful, organised and directed process of relaxation.

Learning such a relaxation technique is like learning any other muscular skill—the more often it is done and the more attention that is paid to it, the faster and better the results. There is a snag, however, in that when a person is tense they are likely to be in the mood to disregard anything that requires much concentration, effort or work on their part; for this reason it might not be so easy to acquire such basic fundamental techniques.

The simplest anti-tension measure is to have fifteen minutes

of complete relaxation after a hard day's work; this will usually enable a man to jump up fit and fresh for his evening's enjoyment. The use of a fundamental technique at night before going to bed and in the morning before starting the day will be found to pay great dividends. At night, it aids the development of relaxed sleep and in the morning a consciousness of relaxation enables a person to get through the day keeping loose and easy.

It is a physiological fact that muscles automatically begin a process of relaxation after they have been contracted; it seems, therefore, that benefit can be obtained from including five or ten minutes' daily stretching of the muscles into one's routine. To do this, lie down on the bed and see how many ways you can stretch the various parts of the body—twist, turn and stretch, trying to give each muscle group a good stretching. Because of the general improvement in bodily circulation caused by the muscular action, a general bodily relaxation accompanied by a warm glow will be felt. When you have been spending a lot of time on one specific problem and require "tapering-off", a long walk is useful, during which you concentrate on slowing down your breathing and trying to "let-go" everything each time you exhale.

A basic fundamental relaxation technique can take the following form—either lying down or sitting in a comfortable chair—work is started on the muscles :

1. Beginning with the muscles of the jaw, face and shoulders—alternately tense them lightly for a few seconds, and then, associating the action with a slow exhalation of the breath (in the form of a soft sigh), let the muscles go as limp as possible. It is very important that the muscles should not be tensed too much, just enough to feel them get a little tight.

As you tense, let yourself become conscious that this is

## YOUR NEXT PROMOTION MAY KILL YOU !

TENSION—this is what you are trying to AVOID ! It is helpful to say as you tense the muscles : “This is tension ! This is what I don’t want !” Then let the muscles go limp and loose, so that you become conscious that this is what you are after—this is RELAXATION; again, you tell yourself this fact.

2. When you have done this four or five times with the jaw, face and shoulder muscles, transfer your attentions to the arms, hands and chest muscles. Followed, after a few minutes, by the abdominal and pelvic areas; when dealing with the latter, tighten the abdominal muscles, press the knees and ankles together and hold it for a few seconds, feeling the tension—then let go. Next, move to the feet, clenching the toes to create tension and then letting everything go loose and limp.

Try to remember to associate with the tension a breath-holding process, and with the relaxation an exhalation of breath.

3. Work completed on the various muscle-groups, try to tense simultaneously all the muscles of the body for a few seconds, followed by a complete “letting-go”. The use of a full-length mirror sometimes aids this procedure.

That is the fundamental technique; after two or three weeks’ conscientious attention it will become a reflex action, to be used subconsciously without any noticeable effort on your part; it will also serve as a foundation upon which other relaxation aids can be erected.

It never fails to surprise a man when he realises how tense he has permitted himself to become during his average day; once he has become conscious of tension and its symptoms he will notice that he is wrapping his feet around the legs of his chair, that he is holding his fists tightly clenched, that he is

pressing his knees together when he has his legs crossed, and grimly holding on to the telephone as though it might leap from his hand!

Other tension-relaxing aids are as follows—when walking, doing desk-work or some kind of physical action, use the general technique and, every now and then, consciously tense yourself for a few seconds and then let-go, trying to work in this loose and easy manner for a while. By alternating tension and relaxation at frequent intervals, you will soon learn to work, walk, or perform physical actions in a loose relaxed fashion.

Pay special attention to the breathing; when in a state of anxiety or excitement one is inclined to develop “over-breathing”, which means that the chest and abdominal areas become tense, creating shallow breathing and lack of oxygen. Try to get into the habit of breathing slowly and deeply from the abdomen, particularly when in tense periods of activity; there is nothing like a few deep breaths to settle one down!

Try to associate the relaxation technique with everything you do; if you are writing, check the way you are holding the implement and purposely try to develop tension; then follow it through by doing it as loosely and easily as possible.

By developing a technique of relaxation that can be used at will, a subject will eventually have a reflex of relaxation instead of tension, so that he automatically relaxes when tense moments come up. Work and play will be found to be much more pleasant, there will be more time for everything, and life will not only be more agreeable and successful, but also longer!



## CHAPTER THIRTEEN

### BE LIKE JACK SPRATT!

Many men run into physical trouble in their forties and fifties because their bodily machine is growing less fit to handle the stress-load, which has increased because of the greater responsibility of both business and domestic life. There seems to be a most unsatisfactory mortality trend in middle-aged males appearing in most of the English-speaking world; an increase which is true and not the result of ageing of the population or improvements in diagnosis. The prime killer is Coronary Thrombosis, said to be laying low more people than any other single complaint.

The daily toll of this insidious killer has increased so fast as to be almost doubled in the last ten years—about three hundred men in the prime of life and at the height of their capabilities will suffer a devastating heart attack in Britain during the next twenty-four hours: these particular men, most of them in fine physical condition except for this minute defect, will be struck down tragically. A sudden stoppage in a branch of one of the two small arteries—the coronary arteries—which serve as fuel-pipes to the heart muscle will kill about sixty of these men and cripple the rest for months, radically altering the tenor of their lives for the rest of their days. It is estimated that one out of ten men in the late forties has such extensive damage to his coronary arteries that he is a likely candidate for a heart attack at any time. In the early sixties three out of every ten men have this unsuspected weakness;

only one man in every ten over sixty years of age has no coronary damage at all.

The cause of this dangerous affliction is obviously something widespread and which begins its deadly assault fairly early in a person's life. How early was indicated by the findings of U.S. Army doctors who examined the hearts of three hundred young American soldiers killed in Korea—young men who seemed to be fighting fit and at the very peak of their physical lives when they laid them down for their country. Yet, these investigations showed that eight out of every ten of them—eighty per cent—had damage which at the average age of only twenty-two years made them likely candidates for a "coronary" in middle-age. One most important and interesting clue emerged from this investigation—no similar damage was found in the hearts of young Korean soldiers killed at the same time, and, although some damage was found in the hearts of young Japanese killed in accidents, it was slight.

That can only lead to one conclusion—that there is something in the diet of the Western world which is causing damage to the heart, and that something is almost certainly *too much fat*. In this country, the alarming increase in coronary thrombosis has been closely paralleled by a substantial increase in the quantity of butter, margarine and milk being consumed. This indictment of fat is strengthened by other evidence—in Norway and Germany during the war, when there was a severe fall in fat intake, there was also a marked decrease in the number of heart attacks; the African negro eats little fat and rarely suffers from this condition, but his fat-eating cousin, the American negro, dies frequently from it. In India, coronary thrombosis is many times more common among the Parsees whose diet is of the Western type than

## BE LIKE JACK SPRATT!

among the Hindus, who are vegetarians and eat little fat. Medical Research Council figures show that the risk of a "coronary" is almost twice as high among professional men as it is among poorer semi-skilled workmen—indicating that the men who eat the richest diets are the most prone to sudden heart attacks. It would appear that business executives do not have heart attacks because of stress and worry but because of fat business lunches followed by four-course dinners in the evening.

When the blood becomes loaded with minute fat droplets after a too-rich meal of such nutritious foods as butter, cream and dripping, it is much more likely to form small clots which stick to the walls of the coronary arteries and are absorbed there. In this way they gradually narrow the bore, or calibre, of the artery so that the vital fuel pipe is heavily "furred-up"; a further clot can suddenly completely plug it—with disastrous results. It has been adequately proven by experiment that a meal of two fried eggs, bacon, buttered bread and milky tea will cause the blood, within three hours, to clot much more readily than if a less rich meal had been eaten; it will also be found that the blood has large quantities of fat coursing through it.

There are a fortunate few who can eat fat with impunity and are naturally immune to coronary thrombosis; perhaps ten per cent, on recent investigation, can eat a lot of fat without it appearing in the bloodstream; for the others, eating a meal rich in fat will increase the likelihood of a clot forming. Under the age of fifty a man's chance of suffering a sudden heart attack is *eight times* greater than a woman's! If fat in the diet causes the condition, and women presumably eat substantially the same diet as their husbands, how does this enormous sex difference occur? Hospital tests suggest that

women are escaping heart trouble in middle age because their coronary arteries are protected by substances found only in the female body. Called Oestrogens, these substances affect the way in which the fat is carried in the bloodstream, so that much of it is in a far less damaging form for women than for men. The protective action of these substances seems to be lost in the early fifties when oestrogens cease to be produced; from then on women quickly become more susceptible to the dangerous blood stoppages in those heart arteries called coronary thrombosis. Unfortunately it has not so far been possible to give satisfactorily these protective substances to men because of unpleasant after-effects.

There is no doubt that being overweight increases the danger of coronary thrombosis, but it is now thought less likely that this disease is due to any direct strain on the heart caused by excess weight. It seems more likely that the overweight coronary patient is the one who has eaten too much fat, which has damaged his arteries as well as increasing his girth. Slim men who go down with heart attacks may be those who never put on weight however much, or whatever, they eat.

The five golden rules are :

1. Cut down on the total amount of fat served with meals by making less use of the frying pan and by rationing butter, cream and milk. Avoid too much fat meat and fat fish, such as herrings and kippers. Do not give up fats entirely, but avoid a surfeit, particularly in the form of too much fat at one meal; plan the menu so that if the main course is rich in fat, the sweet is fat-free. For the over-sixties, a reduction in fat intake seems to be particularly important, because the blood becomes more easily loaded with fat as men get older. Milk is a source of fat which has greatly increased in the last ten

## BE LIKE JACK SPRATT!

years because more is being drunk; excessive milk drinking in adult life may be harmful, but there is no justification for withholding milk from children, whose arteries seem to be immune to the effects of fat.

2. Make use of the evidence that vegetable fats are less dangerous than animal fats; fry food in olive oil and other fats derived from plants. A comparison between British workmen, who eat large quantities of animal fat, and Italian workmen, who consume olive oil, showed that the British had far larger concentrations of dangerous fatty substances in their blood; Italian doctors claim that there is far less coronary thrombosis among their countrymen. There is also the evidence that vegetarians are so free from coronary thrombosis that at least one insurance company offers them cut-price rates!

3. It is a good practice to avoid serving extra large meals, even on special occasions; a large intake of calories is bad for the heart, and there is little doubt that small eaters often live longest.

4. Excess weight not only increases the risk of a heart attack but also increases its severity; a man should aim at keeping his weight down to within 7 lb. of the amount he weighed when he was twenty-five years of age. Experts estimate that men who weigh fifteen stones when they should weigh twelve stones run a FIFTY PER CENT bigger risk of getting a coronary.

5. It is thought that a substance called Choline helps to protect the coronary arteries against the damaging effects of fat. Lean meat, liver, kidney and eggs are the richest natural sources of choline, but not more than one egg a day should be eaten because egg-yolk also contains fatty substances.

To sum up—the main precautions are similar to those taken

for ordinary dieting, but they also apply to slim people who tend to over-eat on fats.

There seems to be ample evidence that faulty diet is the main cause of this condition—most men dig their grave with their teeth, so that the greatest responsibility must be carried by the housewife in the kitchen. She, alone, can get her man through the biggest hazard of middle-age by preventing him from literally “eating his heart out”. As one eminent medical man lightly put it: “It would appear that in the rather crude principles of Jack Spratt lie our best chances of avoiding the daily tragedies of this condition.”

So much medical talent is being concentrated on the thrombosis problem that a leading medical authority has stated: “We are surely justified in looking forward to some kind of prevention of this mortal disease of Western civilisation in the near future.”

Another very real bogey for the middle-aged man is that of ulcers—the steady, seemingly unhaltable increase in ulcers of the stomach and duodenum is one of today’s greatest medical mysteries. Few people die with ulcers, deaths being only about one or two per cent, yet, after rheumatism, it is socially one of the most serious diseases because it strikes so many of the most valuable types of citizens.

Forty years ago Duodenal Ulcers were unknown, today its victims outnumber Saturday’s football crowds; they have become the hallmark of civilised man, the modern man’s “wound-stripe”. Wherever people live a modern, industrialised life, this disease strikes in millions; at least ten per cent of adults have, or have had, ulcers. Over ten years ago it was known that there were 1,750,000 people in Great Britain alone with healed or active ulcers, with at least 70,000 men alone suffering in any one year from ACTIVE ulcers. And

## BE LIKE JACK SPRATT!

suffering is the word; by day and by night pain is the inevitable accompaniment of the ulcer. Gastric ulcers (ulcers in the stomach) are now about equally common in men and women, but since 1900 there has been such a dramatic rise in duodenal ulcers in men that they are now four times more common in the male.

There is really little known of the cause of ulcers, but it is strongly suspected that food and diet play a big part—a man is what he eats—modern food changes have taken place in most industrialised countries at about the same time, at about the same rate, and the trend corresponds roughly in time with the rise of ulcers.

There are also class differences—gastric ulcer is clearly related to poverty; up to fifty-five years of age duodenal ulcers show no class distinction, but after fifty-five the death-rate among the rich rises until at seventy it is about two-and-a-half times as high as among the poor—duodenal ulcers in the elderly are clearly associated with wealth.

Anxieties about money and work are the chief psychological features; the great ulcer wave of 1940 followed the first air raids, and waves of perforations roughly followed the bombings. But a curious fact is that ulcer incidence *FELL* in the worst hit areas during the Depression but rose when employment rose.

Certain jobs may make people more prone; miners, transport drivers and conductors, men in responsible executive positions, and probably doctors, are more than usually prone; sedentary workers show fewer ulcers than industrial workers and labourers; night-work has little effect, irregular meals possibly some effect. Both alcohol and tobacco are blamed as possible predisposing causes by many doctors and laymen, usually being discussed with more emotion than critical

curiosity. The wise patient will be guided here by his own reactions.

Basically, orthodox treatment has not altered much in thirty-five years and there is no doubt that it alleviates symptoms, even if long-term results are not encouraging. Surgery has improved, and for some types is essential, but is not now so lightly recommended. But any treatment in which the patient believes will, to a certain extent, alleviate his sufferings; faith and hope play their part in both orthodox and unorthodox treatments—if one treatment commands more faith than another, it is to that extent a better treatment.

It is interesting to note that the case against caffeine (present in coffee) is experimentally stronger. There is a theory that stomach changes (e.g. lessened secretion of acid-resisting mucus) can be caused by disturbances in the nervous system; experiments on animals have proved that ulcers can be caused by stimulation of a part of the brain.

The ulcer victim, drinking his alkalis, anxiously eating his miserable diet, coping with nausea, swallowing his water-brash, hiding the pain, the gripes and gnaws, fearing the meal his "hunger-pain" makes so desirable, will find that the food prohibitions are immense, often quite unnecessary, and psychologically disastrous. The diet mainstay is milk, with eggs second, and the drill is frequent meals; some doctors give food or alkalis every two hours. No roughage is allowed as it is believed that pain is caused by food passing over the ulcer; the diet is bland, dreary and unappetising. It is based on the belief that ulcers are caused by the stomach's hydrochloric acid, and that the patient's own digestive juice is digesting the protein of his stomach walls (this is quite probably true as a last link cause). The aim, therefore, is to neutralise acid with alkalis, to absorb it with chemical absorbents, to use it up with



## BE LIKE JACK SPRATT!

frequent meals. Since it is believed that the high stomach activity often found in ulcer cases aggravates damage and pain, drugs to reduce muscular activity are also given.

But, if fear and anxiety are so important (and they undoubtedly are) why should they be increased by often needless food prohibitions which centre the patient's attention on his stomach and raise acute anxieties every time he faces a meal? If food, passing over the ulcer, causes pain, why give him such frequent meals? If excessive stomach activity, stimulated by food, aggravates his condition, why give his stomach no rest?

It cannot be ruled out that the changes in food outlined below, operating daily for years, may be the cause of bodily changes and bodily damage. Diseases of dirt have largely been beaten, but there is an alarming increase in chronic, degenerative diseases; the latter are not often found among peoples who eat fresh, whole, unprocessed, naturally grown foods. One of the great social changes of the past century has been the steady degradation of our food, leading to decline in wholesomeness through a number of factors.

First, the degradation at source—"scientific" farming methods alter the nature of things which grow in the soil through the use of artificial fertilizers and sprays to kill plant diseases and pests, and injections to fight animal diseases.

Secondly, unjustifiable food-processing methods which rob foods of some of their virtue.

Thirdly, the use of preservatives, "improvers" and colouring, flavouring agents. It has been stated that over three hundred substances of whose long-term effects we know nothing are used in food processing.

Fourthly, through the increased staleness of foods there is a nutritive loss; in spite of vastly improved transportation, many

home-produced foodstuffs are staler when they reach the consumer than they were fifty years ago! Freezing, gas storage, chemical preserving, all have certain advantages, but they do not improve foods; the nostalgia of the elderly for the foods of their youth is justified—they WERE fresher and tastier and more wholesome! And so we eat dyed foods, frozen foods, gassed foods, chemically flavoured foods, canned foods, chemically preserved foods, milk which is heat-treated because it comes from tuberculous cows, robbed flour, old eggs from hens unnaturally fed and kept, stale fish (all city fish is stale), stale vegetables often grown by dubious methods, processed cheese instead of original real cheese, butter replaced by margarine, full fruit jam with twenty per cent of last year's fruit pulps preserved with sulphur dioxide and chemically dyed, white sugar, vitamin-less, cereal foods heat treated before the consumer gets them . . . the list is literally endless!

## CHAPTER FOURTEEN

### YOU MUST THINK YOUNG!

Relatively, a man's years are unimportant—he is truly as old as he feels or as he thinks. Many men pass the forty year milestone and give a resigned shrug of the shoulders—"heck, I'm in middle-age now—I can't chase around like I used to do! That is a pessimistic and unjustified attitude, besides being one which is constantly refuted by both the famous and the humble.

Of course, probably the best example of a well-known figure who seems to be defying the years and remaining, Peter-Pan-like, "one of the boys", is footballer Stanley Matthews. Almost at his fiftieth year, Matthews was still playing for Stoke City in fast and arduous professional football—First Division football of the highest calibre, at that! How has he done it? Simply by conserving himself, building a physical fitness foundation in his youth upon which his fabulous skill could be demonstrated in the most favourable manner. When he has been injured he has always insisted that he receive the best possible treatment and has always refused to be "talked into" playing again until he was personally convinced of his absolute fitness.

When he has laid down such a foundation of physical fitness in his early years, a man can go into middle-age feeling fit and healthy. He has the knowledge that he can take part successfully in games suitable to his physique and years, that

## YOU MUST THINK YOUNG!

he can romp with his children without ending up breathless, and that he can lead a full and enjoyable life.

When a man has dealings in his business life or his social activities with young people he will find that he is successful with them in proportion to his ability to keep young in his own spirit and his ability to keep everlastingly before him the fervent longing, feelings and desires of the young people. Once he has lost the perspective of his youth, then away will go his understanding and sympathy for the vagaries and reactions of youth; next, he will become cynical and over hard in his attitude towards the younger people.

It is normal, as we mature, to become more critical and less emotional. This is a situation which must be studied as it may well spoil the relationship between an older man and his younger colleagues by creating in the former an attitude and habit-pattern that will detract from his instructional or advisory capacities. Youth, it must be remembered, is emotional, jealous, eager, enthusiastic, very prejudiced, full of abandon and generally prey to ambitions, fears and depressions. It might be said that part of the job of a man with youth in his charge is to help them to develop into a more sober but still bright and enthusiastic personality. Understanding is the prime fundamental in this endeavour.

Youngsters will not warm up to a coldly mature man who seems unable to remember his own youth so that he is incapable of acting with understanding. Such an attitude not only keeps him separate from the confidence and affection of his charges but also spoils his efficiency; he will teach or advise with views and opinions based on his own mature feelings and attitudes rather than on those of the youngsters he is trying to help and develop.

To know youth and to live with it on its own level is to

become a tremendously effective instrument in the moulding of youth. It could also be said that to do this is to increase the stature of a man, who will not only be able to develop more personal efficiency but will also be able to leave an indelible mark on the character and personality of his charges.

The man who can remember his own youth and who tries to keep not only an understanding of it but a feeling for it is the man who will do a good job for youth—and will keep himself young in the process!



## CHAPTER FIFTEEN

### FACTORS AFFECTING FITNESS

There are certain outside factors which can materially affect one's physical fitness state; among them are smoking and drinking, sleep, constipation, the common cold, and, finally, that modern malady—the slipped disc.

In the old days, if there was one single thing which distinguished the athlete in training it was his abstinence from smoking. In fact, it sometimes appears that sportsmen seemed to think that about the only training they needed was to stop smoking! There has been a remarkable revolution of opinion in this direction; now we see athletes who are accustomed to smoking continuing right through their training and even during the period of their actual contests. This is due to those in connection with athletes and their training taking a more realistic view; they recognise the irritability, the fidgetiness, the nervous disturbance which hits some athletes, and they weigh up the physical advantages of abandoning tobacco by counter-balancing them against the calming processes brought by smoking.

Tobacco is a poison which reduces lung capacity, raises the blood-pressure, and increases the rate of the resting-heart so that the cardiac reserve is reduced. There is a degree of impairment of nervous activity and blunted appreciation, and the athlete might not be so fast off the mark—but all these reactions are very minor indeed. Nevertheless, they are present and it is perhaps best for the top-class athlete to abstain from

smoking; if he has never contracted the habit then he is happy and better without it. For the average man, that is also the case; if he smokes it is for him to decide whether or not he suffers so much from the deprivation that it upsets his nervous system—what he gains in one direction is lost in the other.

As regards alcohol, if a man has marked intemperate habits they will obviously have to be controlled if he is to benefit from any physical fitness programme—but that is rather outside the scope of this book. But the question still remains—is there some special advantage in taking a little drink now and then? That is a difficult question to answer; if one is accustomed to a little alcohol and it enables one to eat one's meals to greater advantage as regards appetite and digestion, it is well to continue. There can be no support for the deliberate administration of alcohol to pep-up a fitness programme, but, at the same time, there is no reason to prohibit its continued use to anyone who is accustomed to it.

Another factor which invariably arouses questions is that of sleep. In the old days a most exaggerated value was placed on the benefits of long hours of rest—athletes were sent to bed at nine o'clock or, at the latest, at ten o'clock and they got up at eight o'clock in the morning—thus they spent nearly half their lives in bed. Surely seven hours is enough for most people and eight should be sufficient for anybody! There is also the traditional belief that an hour before midnight is worth two hours after that witching hour—the only foundation for that idea lies in the fact that it sends athletes off to bed earlier and prevents them from indulgences which might affect their training!

Many people who would not dream of neglecting what they know to be a serious symptom of illness insist on trying to treat certain apparently minor complaints themselves—or they



sit back and hope that it will clear up naturally. Some of them do this, others can be aggravated by neglect or by unskilled treatment until, after hours of pain and discomfort, the patient is forced to seek the medical advice he should have had in the beginning.

There are certain general symptoms which should always receive attention—pain is always a danger signal wherever it is, particularly if its cause is unknown or inexplicable and when it persists or recurs. Loss of weight, especially if accompanied by a feeling of exhaustion or excessive thirst and associated with a normal appetite, should be treated with some respect and further advice sought. But that should not be the immediate signal for FEAR, nor should that emotion prevent a person seeking further qualified advice. That four-lettered word FEAR is responsible for many of the apparent disabilities which afflict Mankind; it makes the heart beat faster so that the timid man thinks that something is radically wrong with that organ. Fear that is not groundless serves to protect our health—when a man gets puffed when playing with the children it is because his body is mildly protesting at the additional effort. If he lets that fact bother him, then all he has wrong with himself is fear.

People often blame overwork for bad health; this is very rarely true—usually those people who seem to overdo things just don't have time to be ill! But, when they are on holiday with plenty of time to think, then their mind strays into hypochondriacal ways of thinking!

Constipation is said to be present when a person does not daily evacuate the superfluous food he has taken in. It can give rise to a general feeling of lassitude and poor health so that the whole system is upset. A faulty or deficient diet or lack of sufficient exercise and fresh air can cause constipation

—both factors can also affect a person when coupled with a change of environment. When a person is on holiday this situation sometimes occurs and can be countered by taking a laxative on the first night or two.

Strong laxatives or purgatives should be avoided; far better to take a saline drink or some senna-pod water every morning before breakfast. Do not make elimination a hurried affair; allow the mind to relax as well as the body—the best time is first thing in the morning or after a meal, and it is essential to establish a regular time each day.

Insufficient intake of liquids is a contributory cause of constipation; drink plenty of water BETWEEN but not WITH meals. Food should be thoroughly chewed to aid in easy digestion, eaten in leisurely fashion and with attention. Vegetables are particularly recommended; possessing excellent laxative properties are grapes, prunes, pears, plums, dates, raisins, figs, currants, apricots, peaches, oranges, grapefruit and rhubarb. The diet should also include food which contains a high percentage of roughage, such as whole grain cereals and whole wheat bread.

Cramp can be beaten quite easily, being invariably caused by loss of salt due to excessive sweating or to insufficient salt intake in the diet. Thus, the simple cure is to take more salt with meals; if this is not enough, a course of quinine-sulphate tablets will do the trick. When cramp occurs, it can be treated by gently stretching the affected muscles and mildly massaging them.

An unfortunate accompaniment of advancing years is prominent veins in the legs; they look unsightly and sometimes cause pain. The best treatment is to stop them appearing in the first place, but once they arrive then early treatment (before they get into a bad state) can clear them up. The

method of treatment might be injections, or by a relatively minor operation, but more often than not elastic stockings are quite satisfactory. These should be put on *before* getting out of bed, whilst still lying down. Never wear garters or tight suspenders if you have a tendency to varicose veins, and try to take time out for lying with the feet up. Walking does no harm, but standing is bad; make a point of having a rest whenever possible, with the feet up and lying flat. Try to do jobs in a sitting rather than a standing position.

A man really begins to think he is getting old when he begins to lose his hair. But it may be due to infection or to a general nervous or run-down condition. He should take immediate medical advice if one or more small bald patches occur on the head—they may be due to worry, overwork, or even eyestrain, and will respond quickly to treatment. Loss of hair and dandruff are often symptoms of a more general physical condition, so medical opinion is advisable. Dandruff can be reduced by the application of sulphur paste and can be kept at bay by cleanliness and frequent brushing. Always wash combs, brushes and hair accessories daily if you are suffering from loss of hair or dandruff—this can prevent re-infection.

Next to the feet, the back works harder than any other part of the body—at the desk, basin, drawing board, bench, in the car, even sitting in the lounge causes it to work in almost back-breaking fashion. The onset of pain, which can temporarily transfix or almost cripple the victim, will often result in an X-ray being taken of the spine. This reveals little but arthritis, a fact which greatly alarms the patient who sees himself doubled up before long! This is unnecessary; every spine in people of mature years will show similar signs of “wearing-out”—actually the presence of some arthritis in an

elderly spine will render it less mobile and far less likely to "slip a disc".

Owing to the strain put on to his back through unaccustomed physical work and encouraged by the faulty posture acquired over the years, he has caused a piece of the packing, one of the shock-absorbers, of his spine to move fractionally out of place so that it presses on a sensitive nerve. This causes pain in the back and/or acute pain running down one leg—down the course of the nerve; in common parlance—he has slipped a disc. This condition has tended, through sheer monotonous repetition, to become a musical-hall joke in recent years, but it is a definite clinical entity from which every man, woman and child will suffer at one time or another in their lives. Actually, the majority of people who are treated for "slipped disc" do not have one out of place at the time they are being treated; it initially became displaced, causing acute pain which made the muscles of the lower back (the lumbar region) tighten up in a spasm, so that they became a "scaffolding" or "splint" to prevent a sudden painful movement. This muscular spasm persists, even though the disc may have edged out and in again almost simultaneously, so that the large majority of disc-sufferers merely need this back stiffness treated—a simple matter of comforting heat and massage, with a few gentle back-manipulations. Even if a disc is still out of place it responds quite well to treatment; according to its type it can be cleared up with manipulation, a painless stretching of the back allowing it to sink back into place; injections, or, in very few cases, an operation.

Unfortunately, there is still no cure or sure prevention for the common cold, but a great deal can be done to cut down its incidence and severity.

It is an unfortunate thing to say, but there seems to be

## FACTORS AFFECTING FITNESS

considerable reason for suggesting that a fit man is more likely to get a cold than an unfit man! The finer condition of the physically fit man, which one would assume would be a preventive, appears to be overwhelmed by other factors associated with physical activity—his loss of Vitamin C through regular and heavy perspiration, for example. If one knows the causes of a condition, then it is easier to take measures to defeat it; by eliminating the factors listed below a great deal can be done to aid the “cold-prone” man.

### *Causative Factors.*

1. Not wearing hats.
2. Sudden changes of body temperature.
3. Loss of Vitamin C through perspiration without sufficient replenishment.
4. Fatigue often associated with sudden changes of body temperature.
5. Fatiguing activity during the early and mild stages of a cold—also before a cold has properly cleared up.
6. Insufficient protein intake for the work that is being performed.
7. Over confidence in ability to “shake it off”. Mistaken impression that high standard of physical condition is an iron defence
8. Chilling during exercise session.
9. Chilling after exercise by standing around.
10. Generally inadequate nutrition.
11. Exertion on top of fatigue caused by lack of sleep or insufficient recovery from previous effort.
12. Careless attitude regarding proper drying of head before going out in cold; wearing insufficient clothing, etc.

Vitamin C is an anti-infective vitamin and helps to combat secondary infections associated with colds. In winter, the consumption of citrus fruit drops and the regular intake of Vitamin C is cut down. Since this vitamin is not stored but must constantly be replenished, foods containing it must be given a top priority. Vitamin C is lost in perspiration—thus a greater need for it is created. A man should eat as many oranges as possible each day and at least a glass of tomato juice per day. Vitamin C can also be taken in tablet form—three 100 milligram tablets, one per meal. If a man has any sign of a cold or has just been exposed to chilling and/or fatigue, give six of these tablets per day for two or three days.

If a man shows possible cold symptoms suggest the liberal use of oranges and tomato juice, as much rest as possible, and plenty of protein food. Such a procedure, especially rest, in the first hour of a cold can often cut it dead or at least lessen its severity. If a man has any suspicions of a cold coming, not to be optimistic—take all precautions anyway. Men who work hard but have low protein food percentage in their diet are more prone to colds, especially heavy colds and other more serious infections. Hard working men should get at least 125, but preferably 150-200 gms., of protein per day. There are two types of protein—animal and vegetable protein. The former consists of cheese, corned-beef, mutton and eggs primarily; the latter can be peanuts, wholemeal flour, peas, spinach, potatoes, carrots, turnips.

Men are more sensitive to infection when they are in a high state of physical fitness. This is due to body temperature changes, perspiration, fatigue, etc. They should be taught to act accordingly, and that it is intelligent and not "soft" to take sensible precautions. They should not let "kidding" by unfit friends force them into casual behaviour.

## FACTORS AFFECTING FITNESS

Lack of sleep lowers resistance, so that extra precautions are needed when men are tired. The importance of sleep after hard effort must be stressed. Lack of sleep when cold symptoms are present will greatly increase chances of the cold developing into a serious one, possibly a major infection.

Men should avoid contacts with people having colds as much as possible. Whenever exposed in this way, take precautions by getting extra rest, avoiding excessive fatigue, and increasing Vitamin C and protein intake. Kissing wives and girl friends who have colds is a very easy, if pleasant, method of passing on infection!

It is only by constantly repeating these facts that a "cold-consciousness" will be developed. Probably the greatest single factor, and the one most easily put into practice, is that of fighting colds by means of nutrition. A proper diet provides the best possible armour against infections, a good Vitamin C and protein intake must be sustained, and everyone **MUST** replenish their body thoroughly after hard effort.

Some of the tougher characters amongst us like to try and "sweat-out" a cold by intense activity. If the cold is a mild one and there is no temperature or indication of sore throat, swollen glands or severe headache, then a good physical work-out often seems to help in getting rid of a cold. However, the work should not be so severe that it exhausts the man; he needs as much energy as possible to fight off any possible infection. When in any doubt, consult a doctor, but most houses have a thermometer handy and if there is any temperature present then don't take a chance!

If a man has had what is termed a "common cold" he can return to work as soon as it departs, providing he has not had a high temperature, in which case it is wise to wait at least

twenty-four hours after the temperature has gone down. If it has been a cold of the influenza type, it is wise to be very careful about when a man returns to full duty. 'Flu often leaves a man in a weakened condition, and it is suggested that his doctor should give permission before he returns to work.